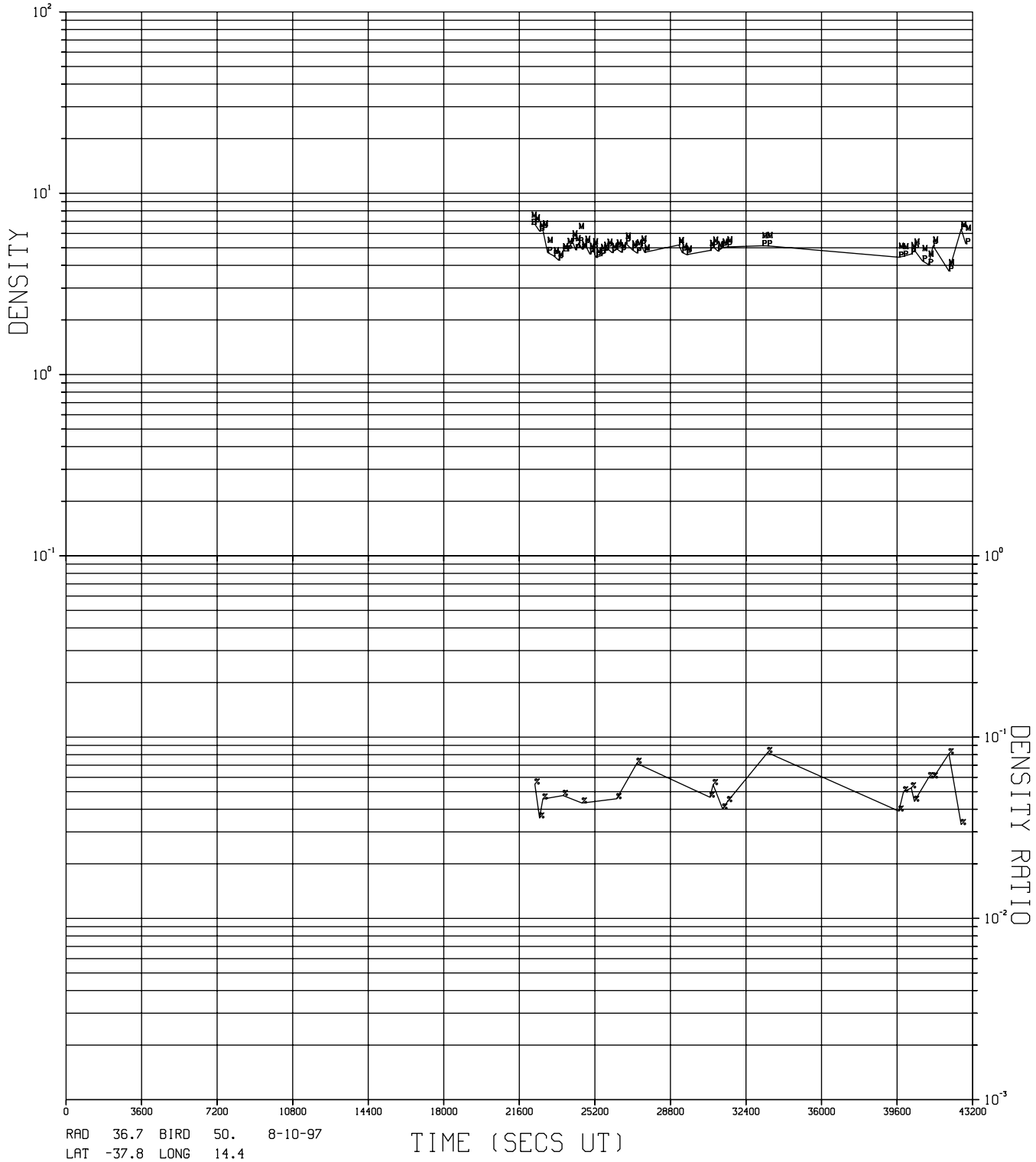
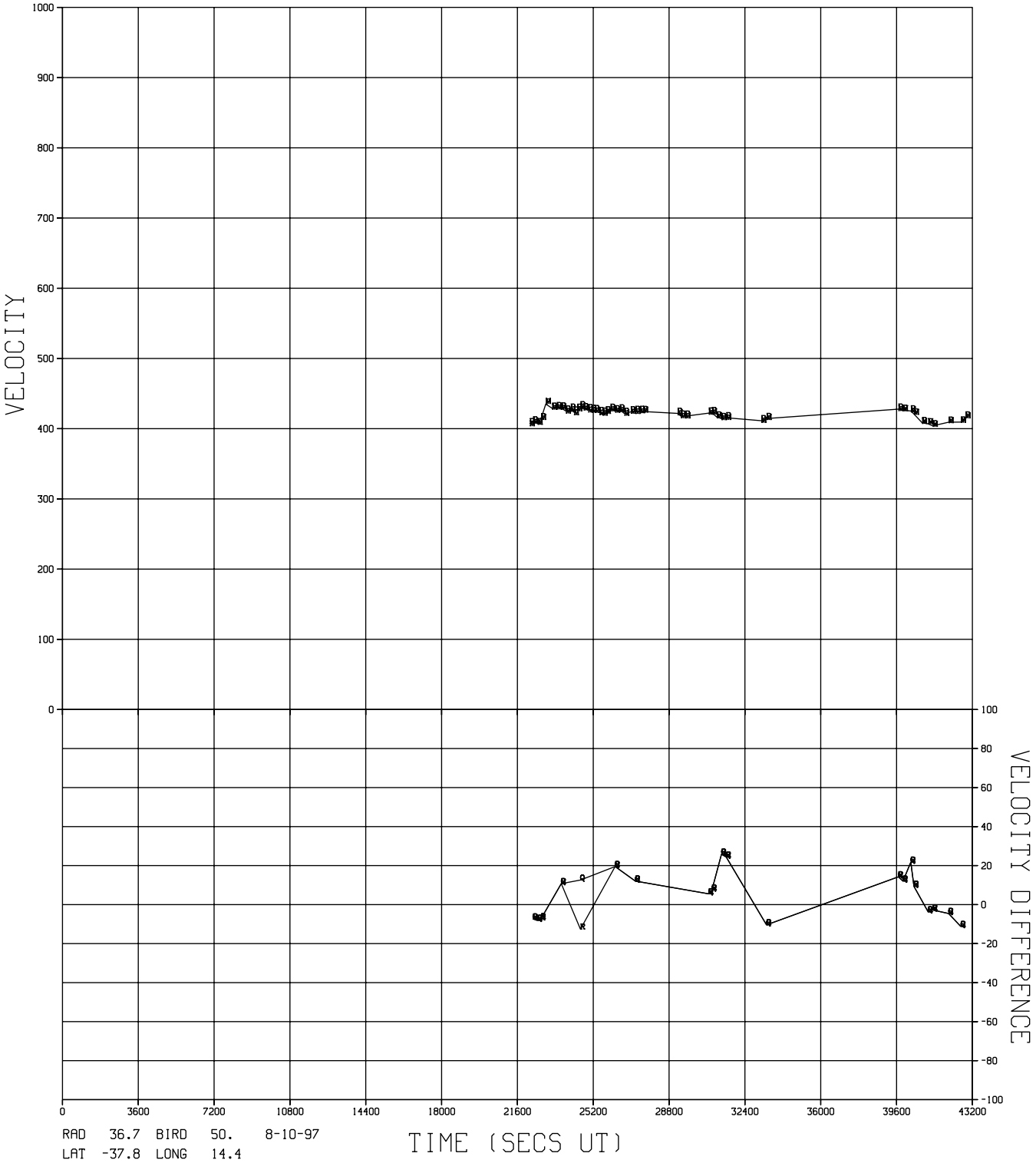
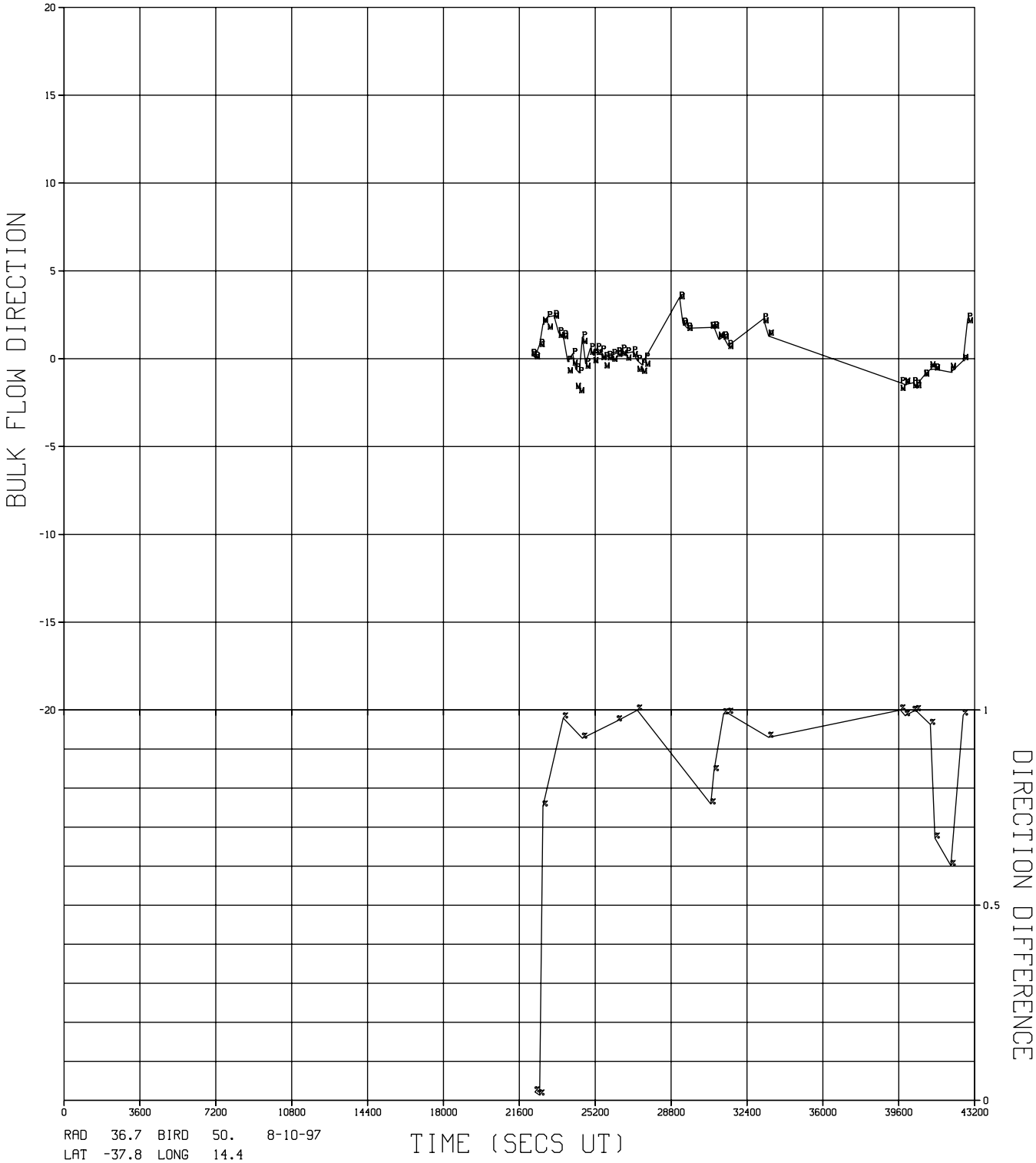
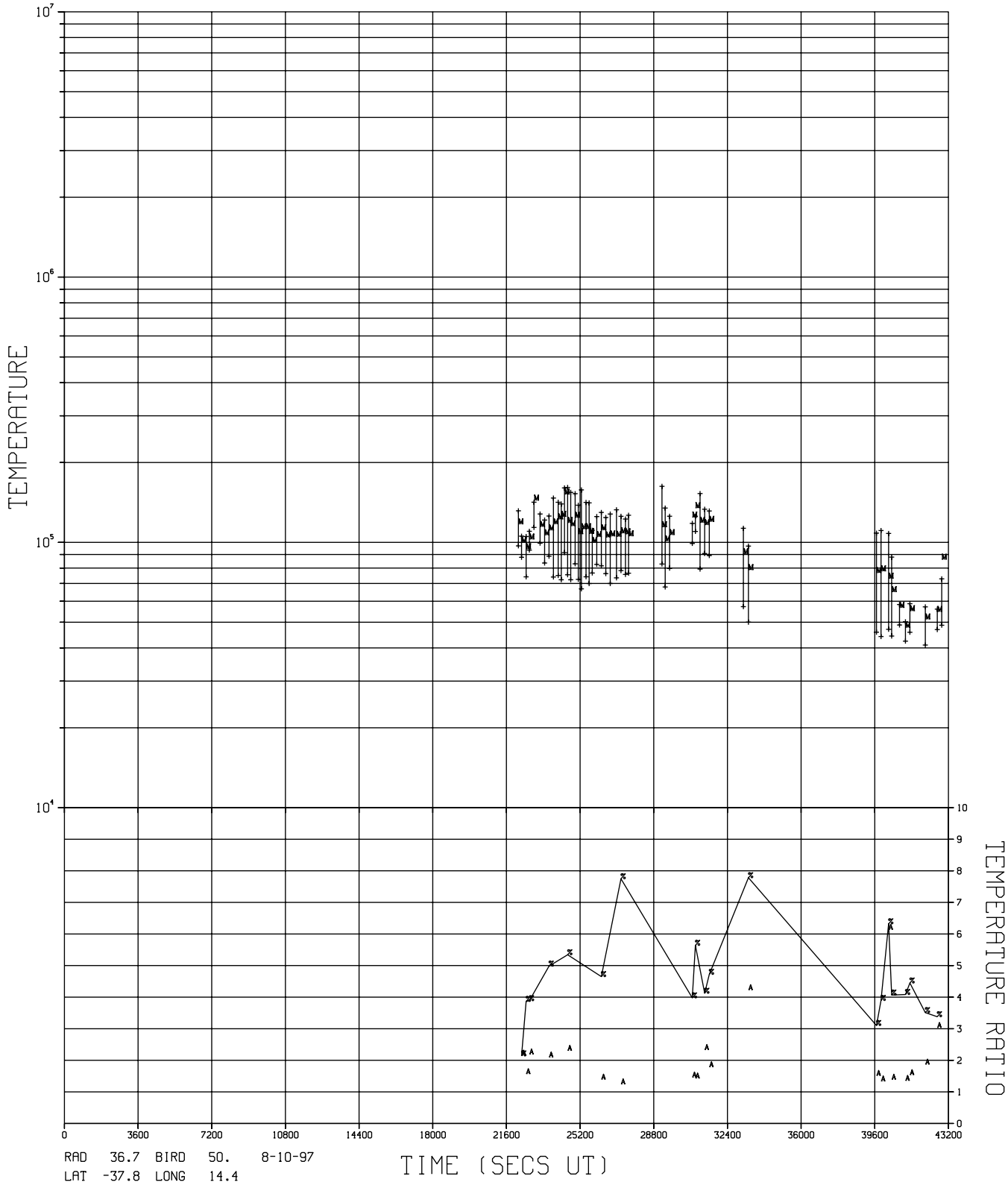
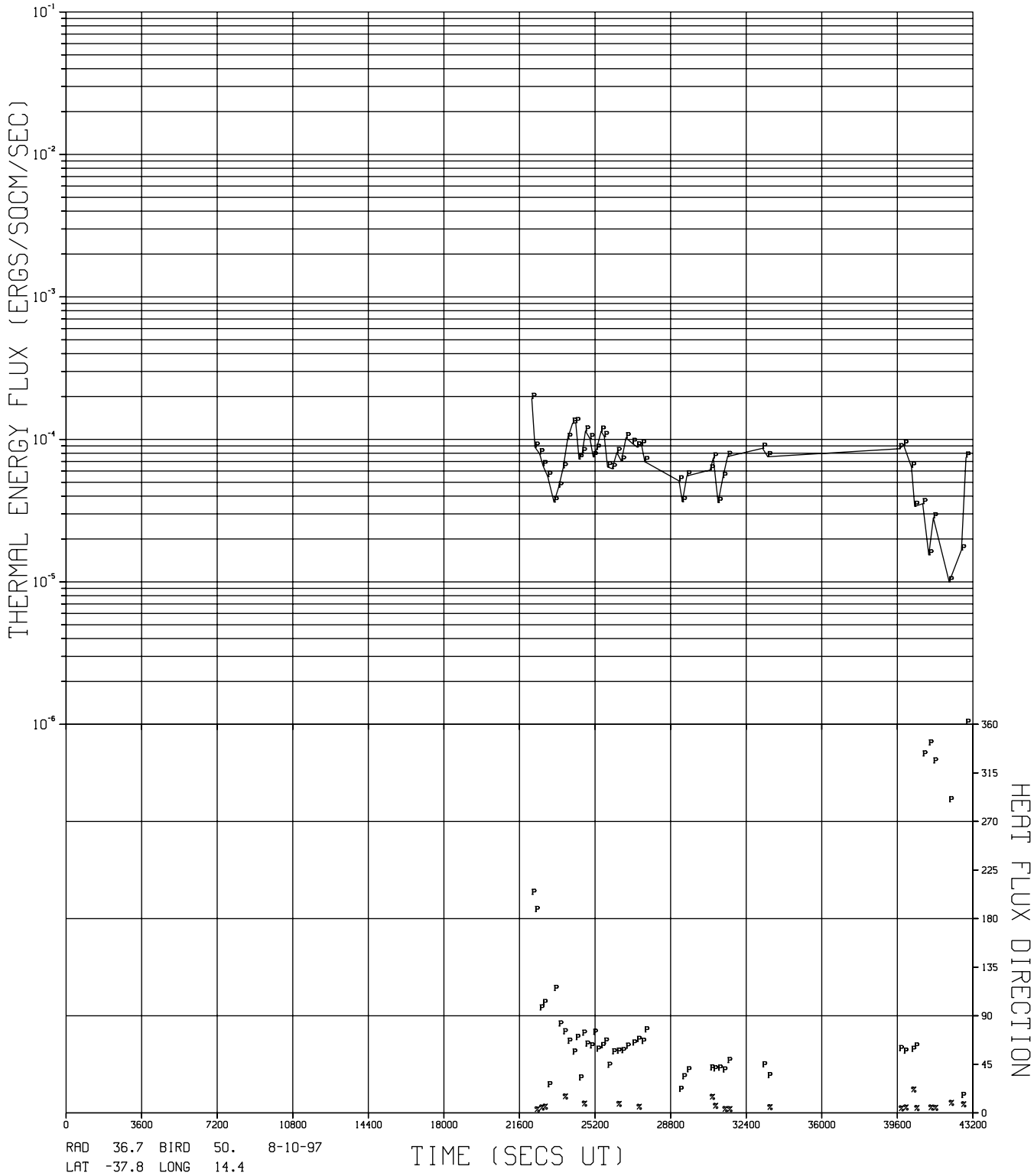
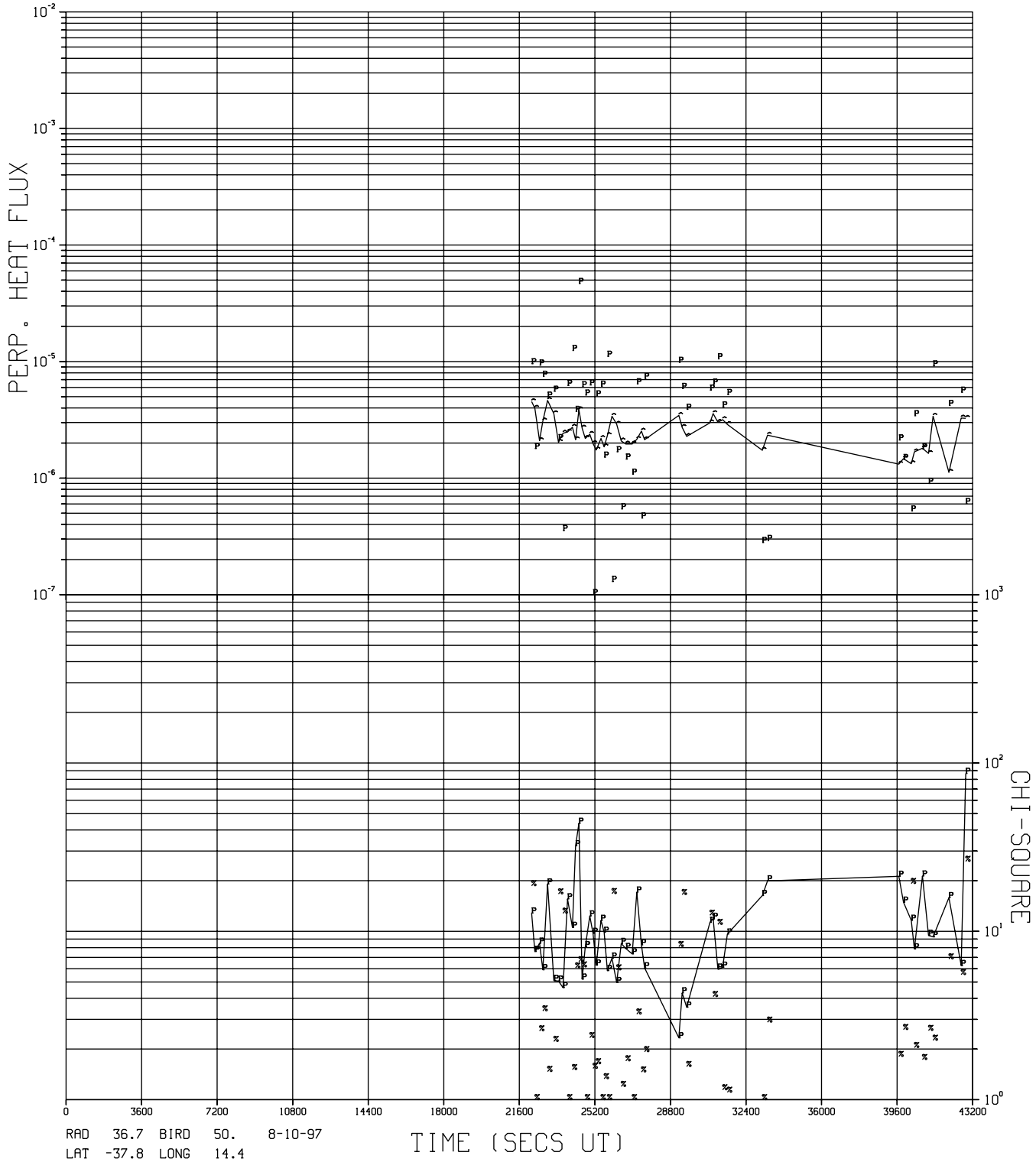

DENSITY
$10^{2}$
$10^{1}$
$10^{0}$
$10^{-1}$
DENSITY RATIO
$10^{0}$
$10^{-1}$
$10^{-2}$
$10^{-3}$
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 36.7 BIRD 50. 8-10-97
LAT -37.8 LONG 14.4

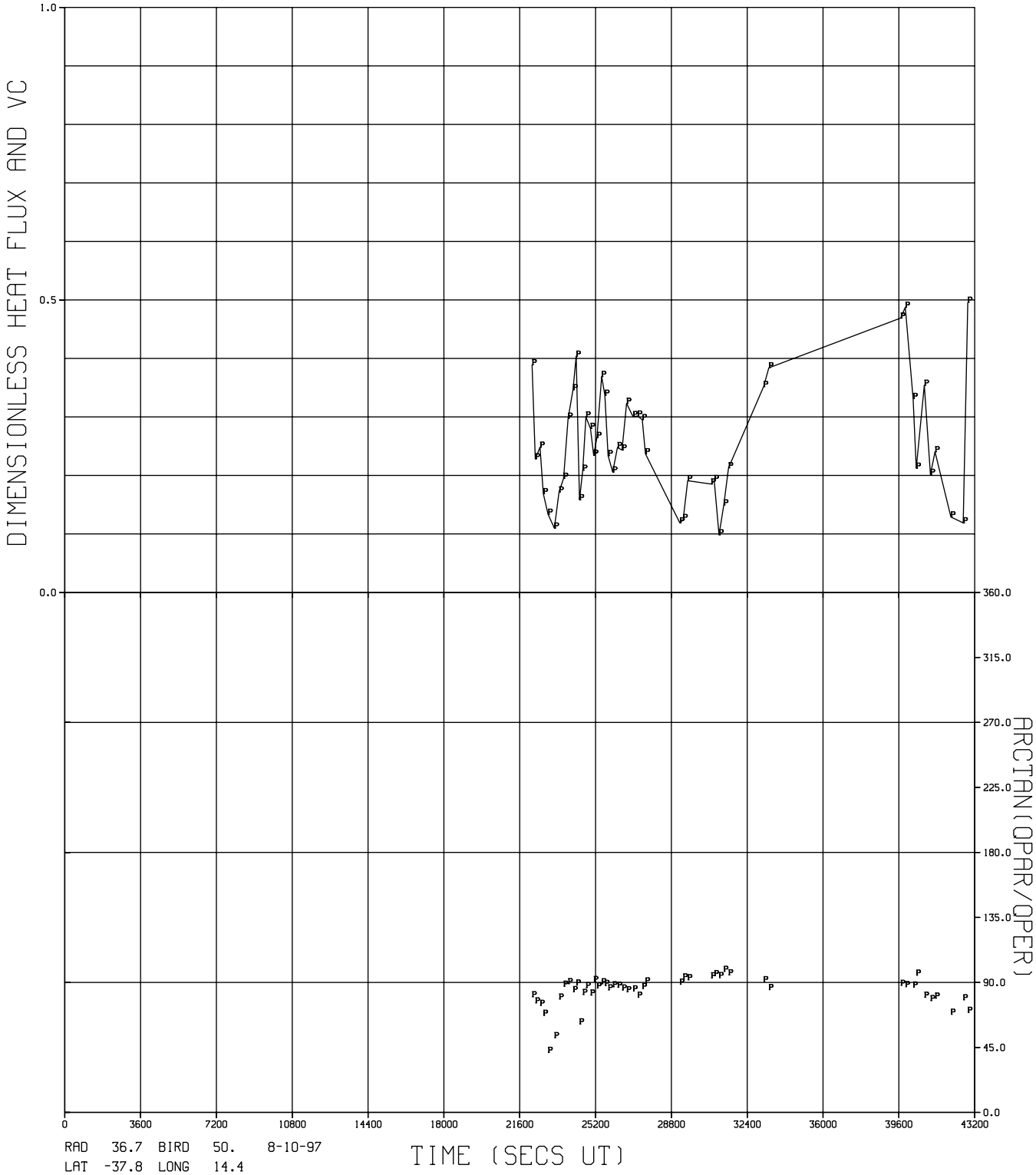

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 36.7 BIRD 50. 8-10-97
LAT -37.8 LONG 14.4

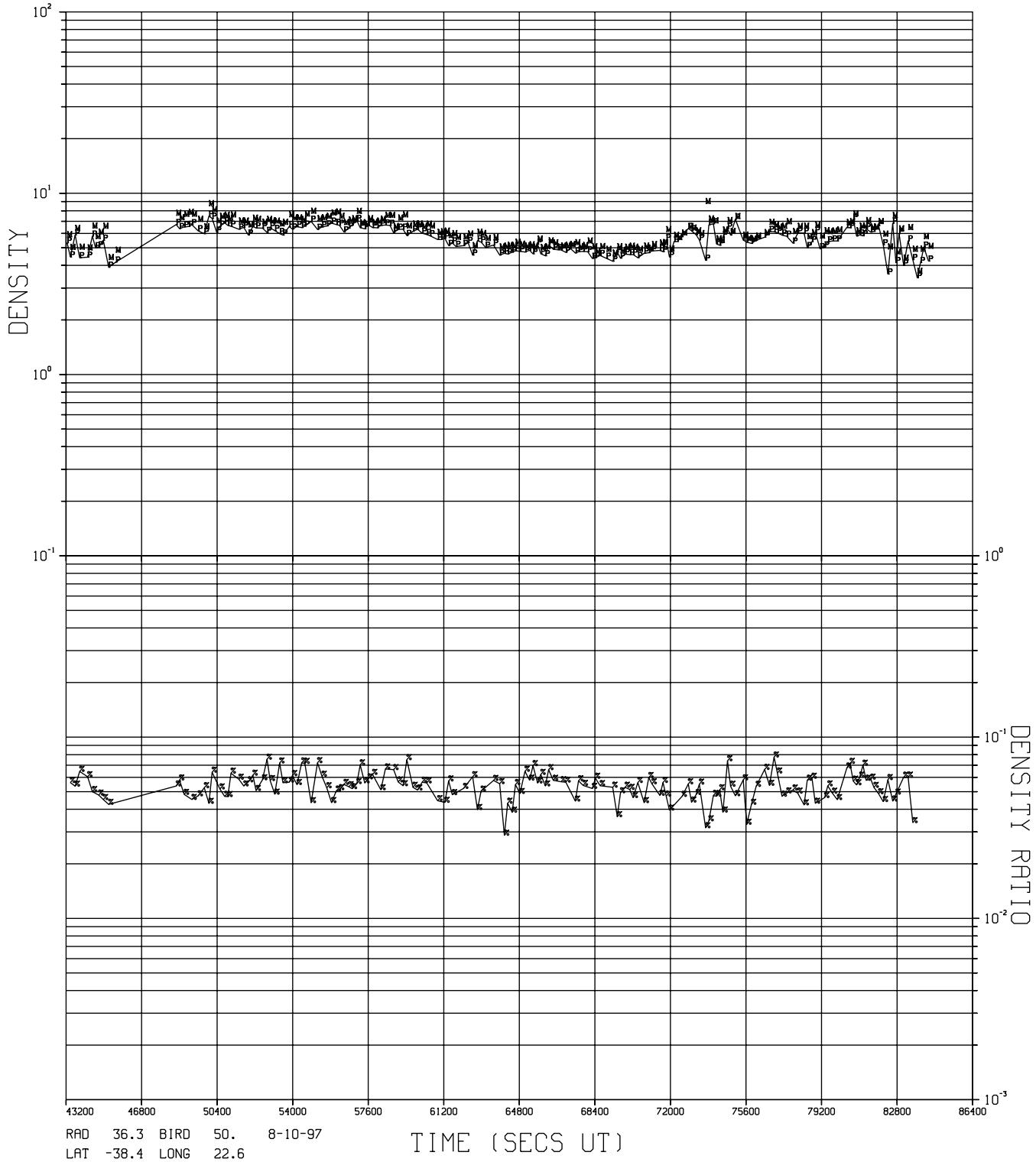

BULK FLOW DIRECTION
DIRECTION DIFFERENCE
TIME (SECS UT)
20
15
10
5
0
-5
-10
-15
-20
1
0.5
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 36.7 BIRD 50. 8-10-97
LAT -37.8 LONG 14.4

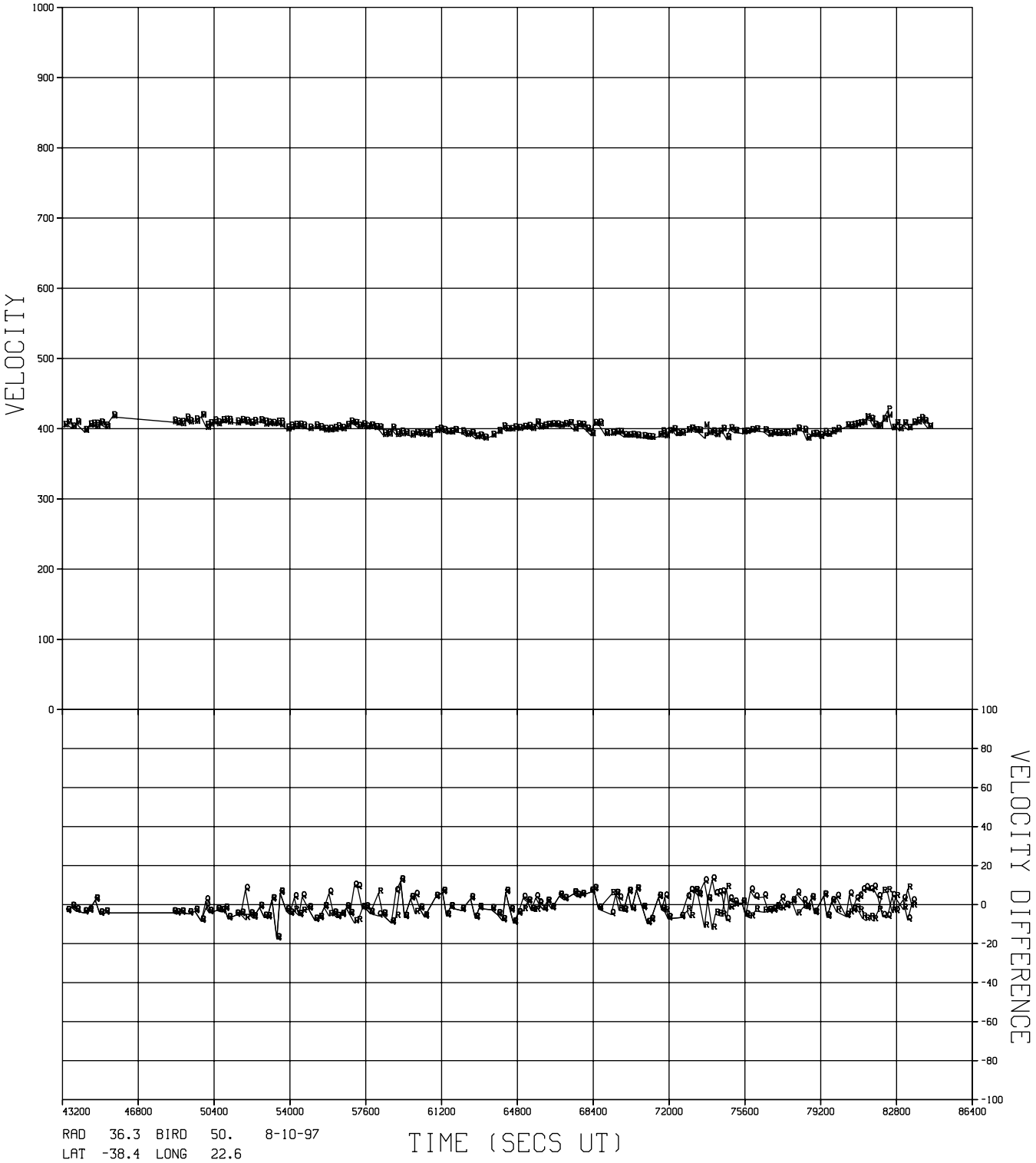

TEMPERATURE
$10^7$
$10^6$
$10^5$
$10^4$
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 36.7 BIRD 50. 8-10-97
LAT -37.8 LONG 14.4

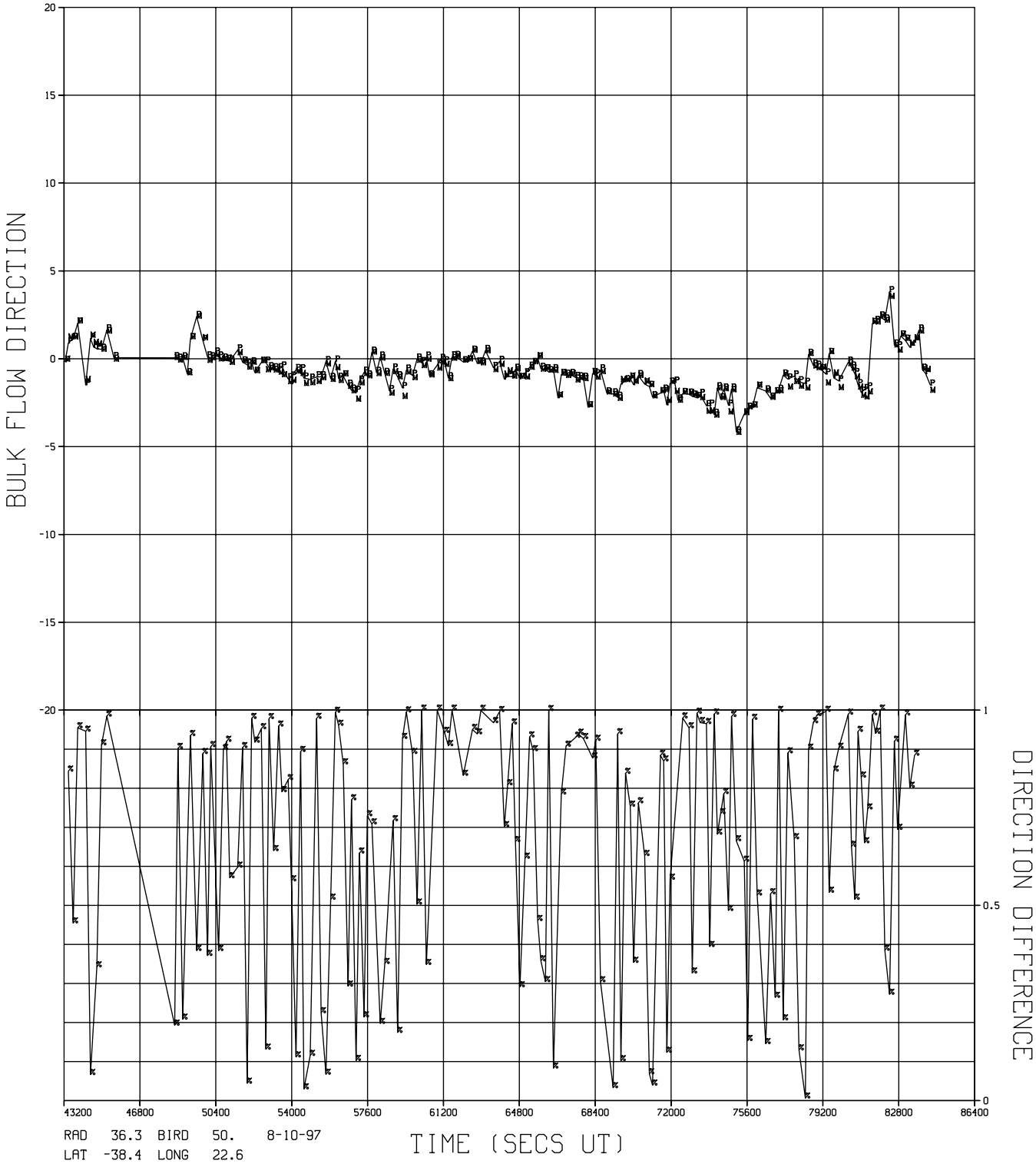

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
$10^{-1}$
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 36.7 BIRD 50. 8-10-97
LAT -37.8 LONG 14.4

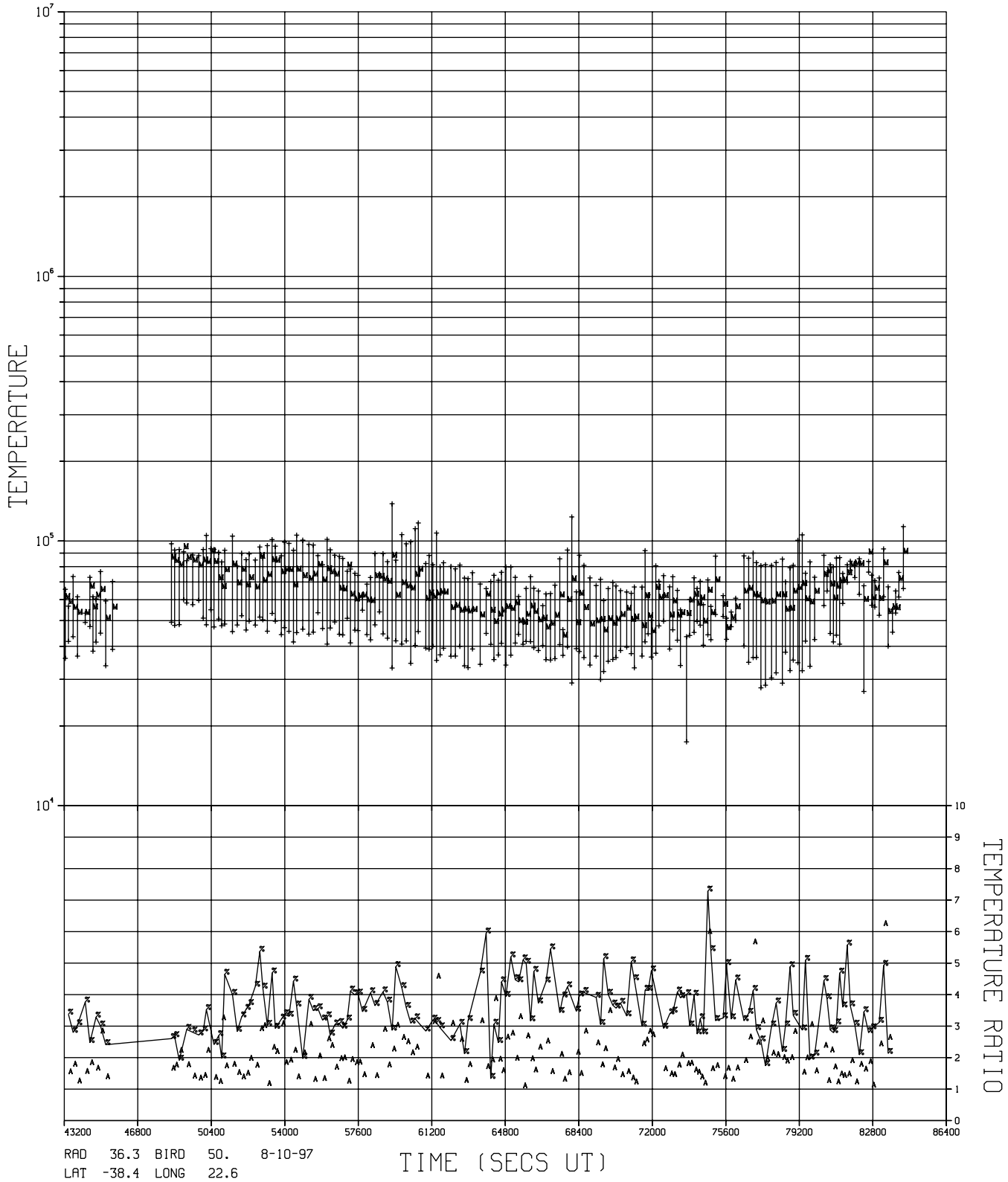

PERP. HEAT FLUX
CHI-SQUARE
TIME (SECS UT)
RAD 36.7 BIRD 50. 8-10-97
LAT -37.8 LONG 14.4


DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 36.7 BIRD 50. 8-10-97
LAT -37.8 LONG 14.4


DENSITY
$10^2$
$10^1$
$10^0$
$10^{-1}$
DENSITY RATIO
$10^0$
$10^{-1}$
$10^{-2}$
$10^{-3}$
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 36.3 BIRD 50. 8-10-97
LAT -38.4 LONG 22.6
TIME (SECS UT)


VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 36.3 BIRD 50. 8-10-97
LAT -38.4 LONG 22.6
TIME (SECS UT)


BULK FLOW DIRECTION
20
15
10
5
0
-5
-10
-15
-20
DIRECTION DIFFERENCE
1
0.5
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 36.3 BIRD 50. 8-10-97
LAT -38.4 LONG 22.6


TEMPERATURE
$10^7$
$10^6$
$10^5$
$10^4$
TEMPERATURE RATIO
0
1
2
3
4
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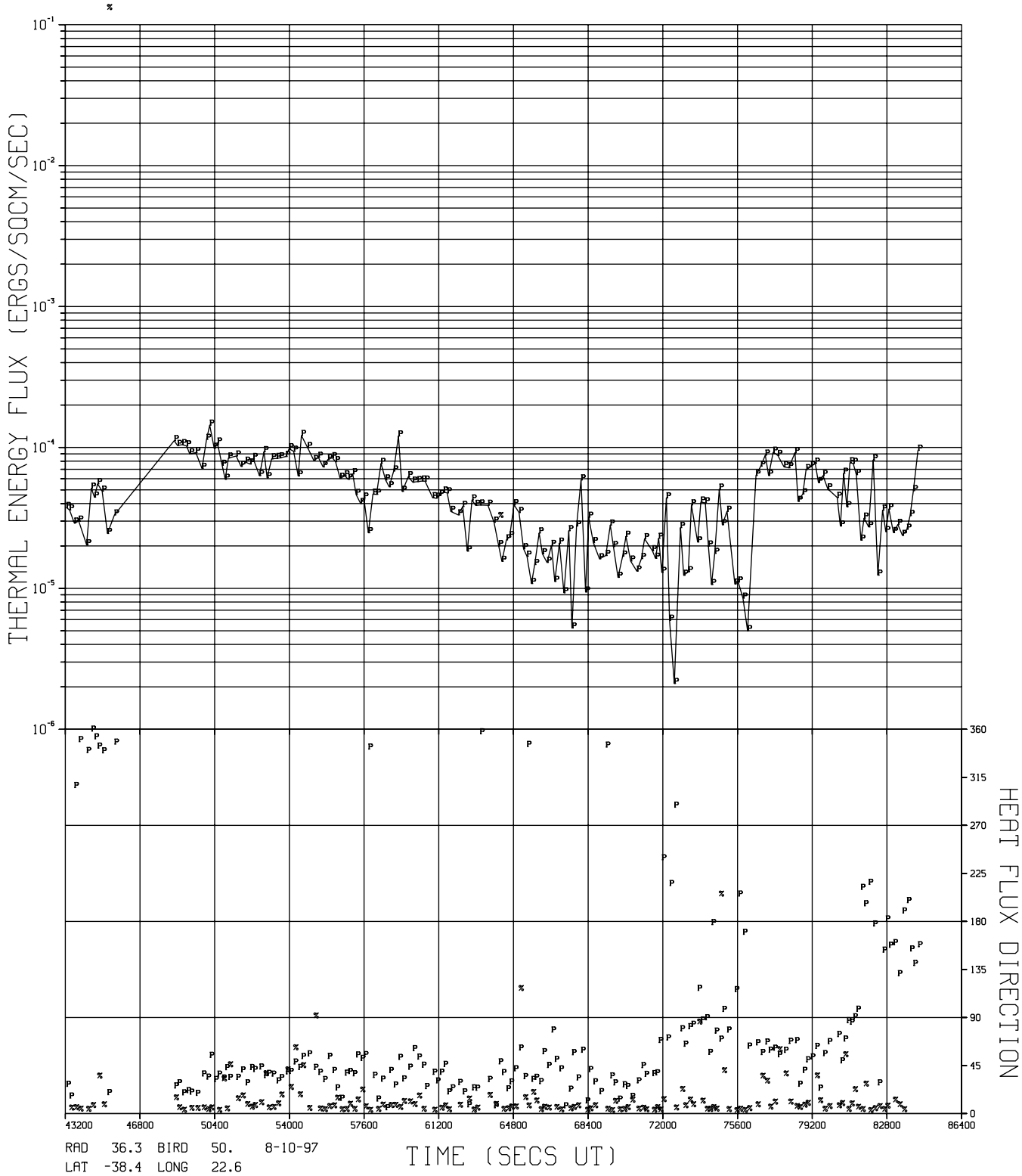
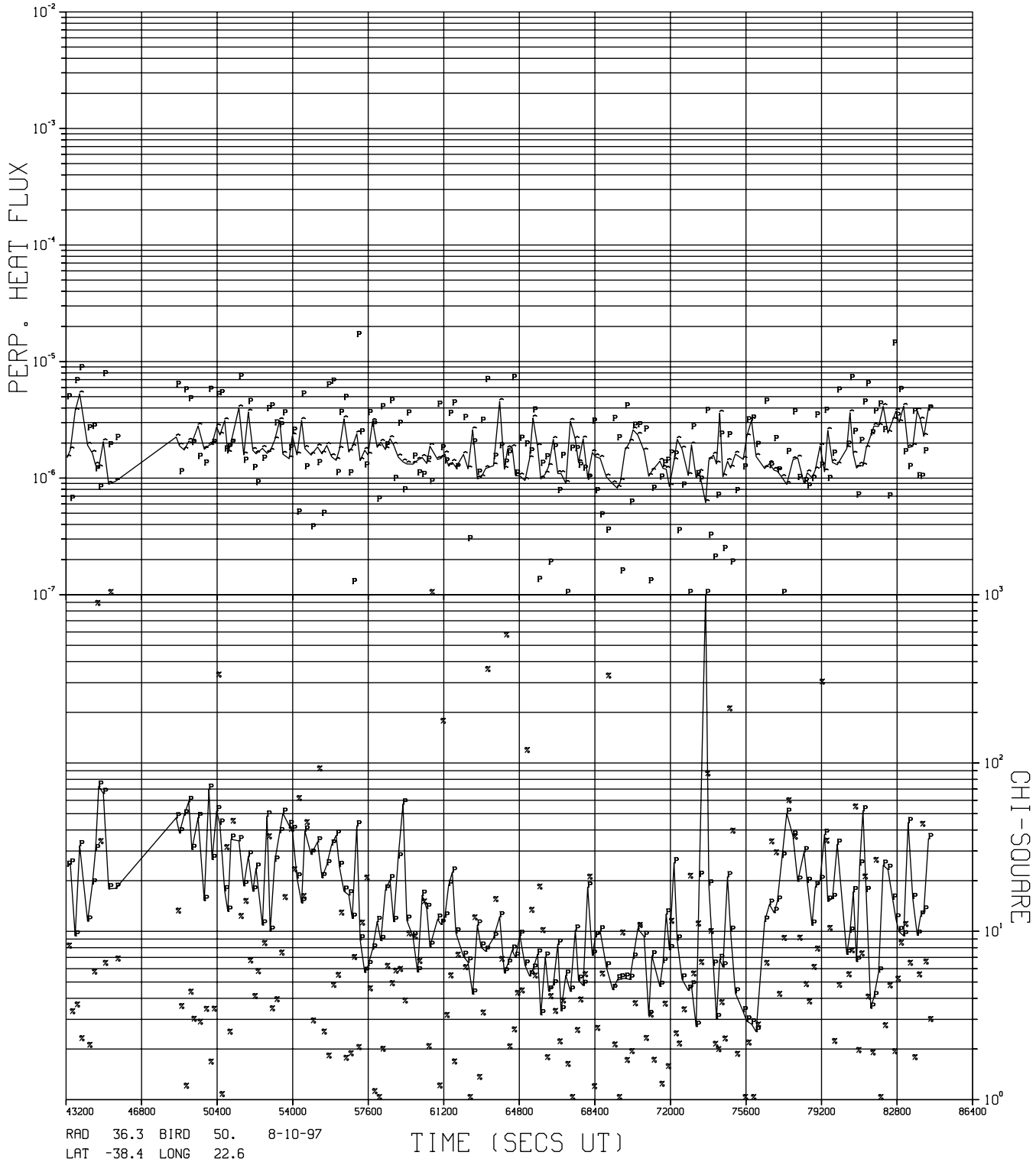
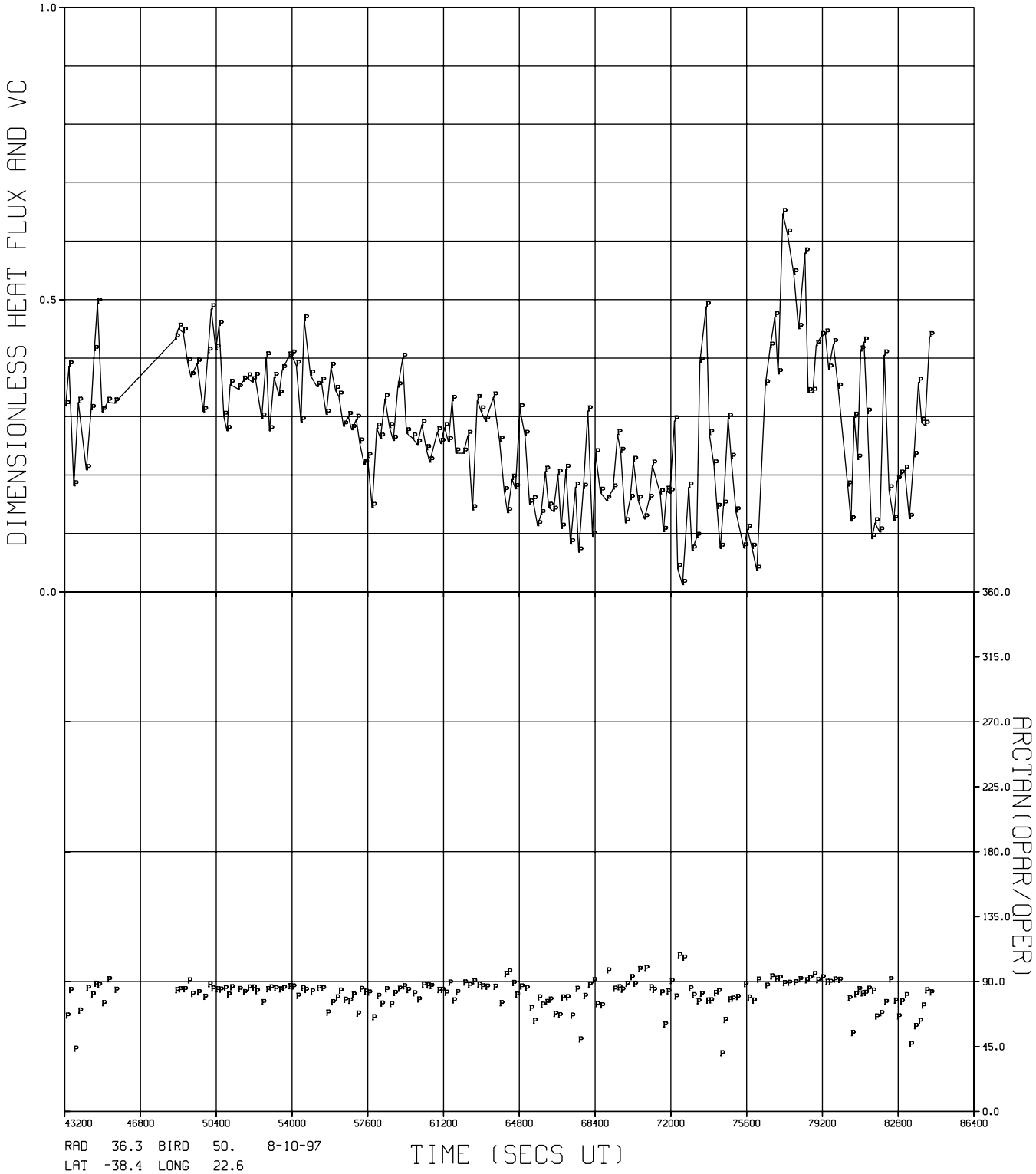
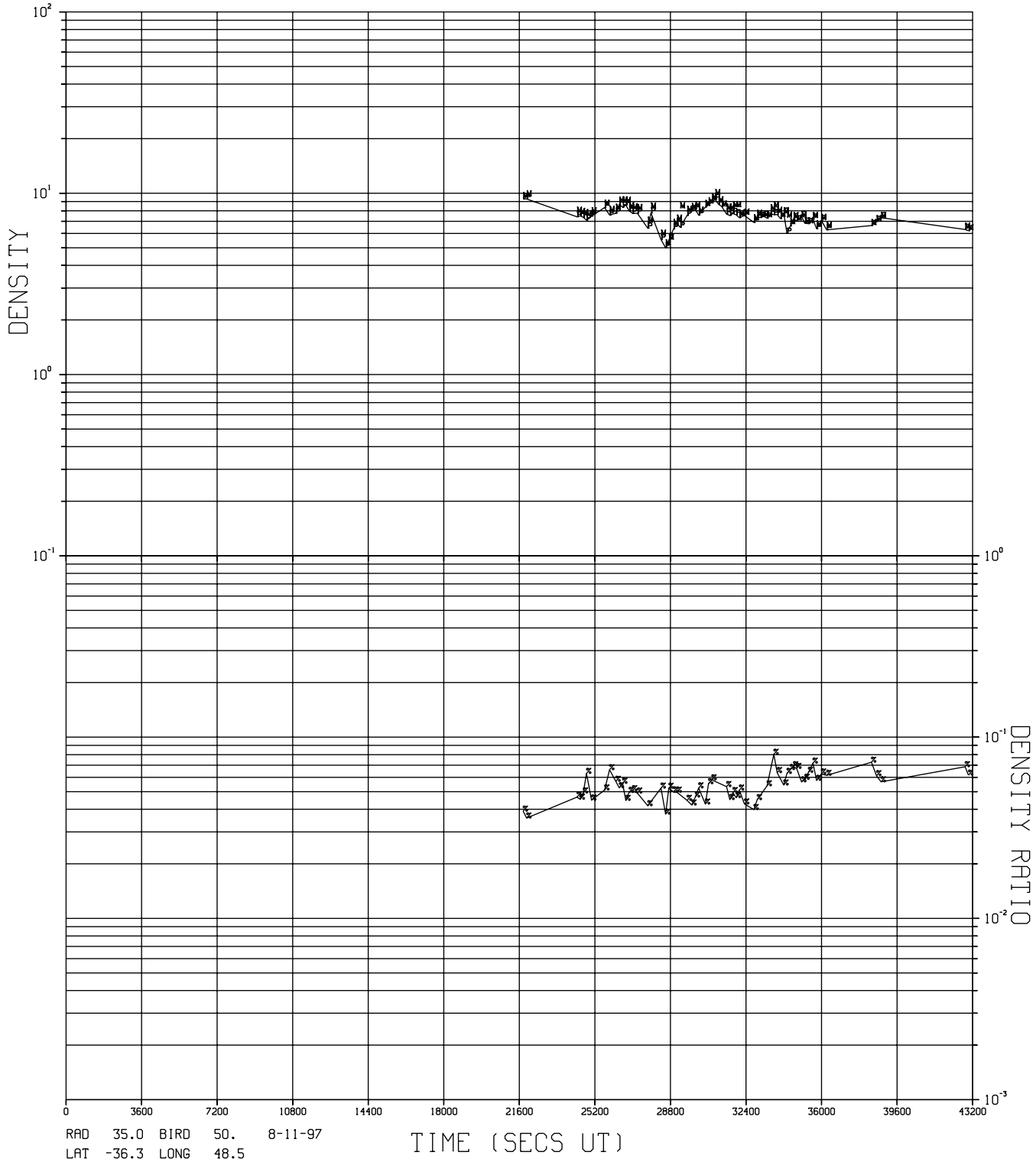
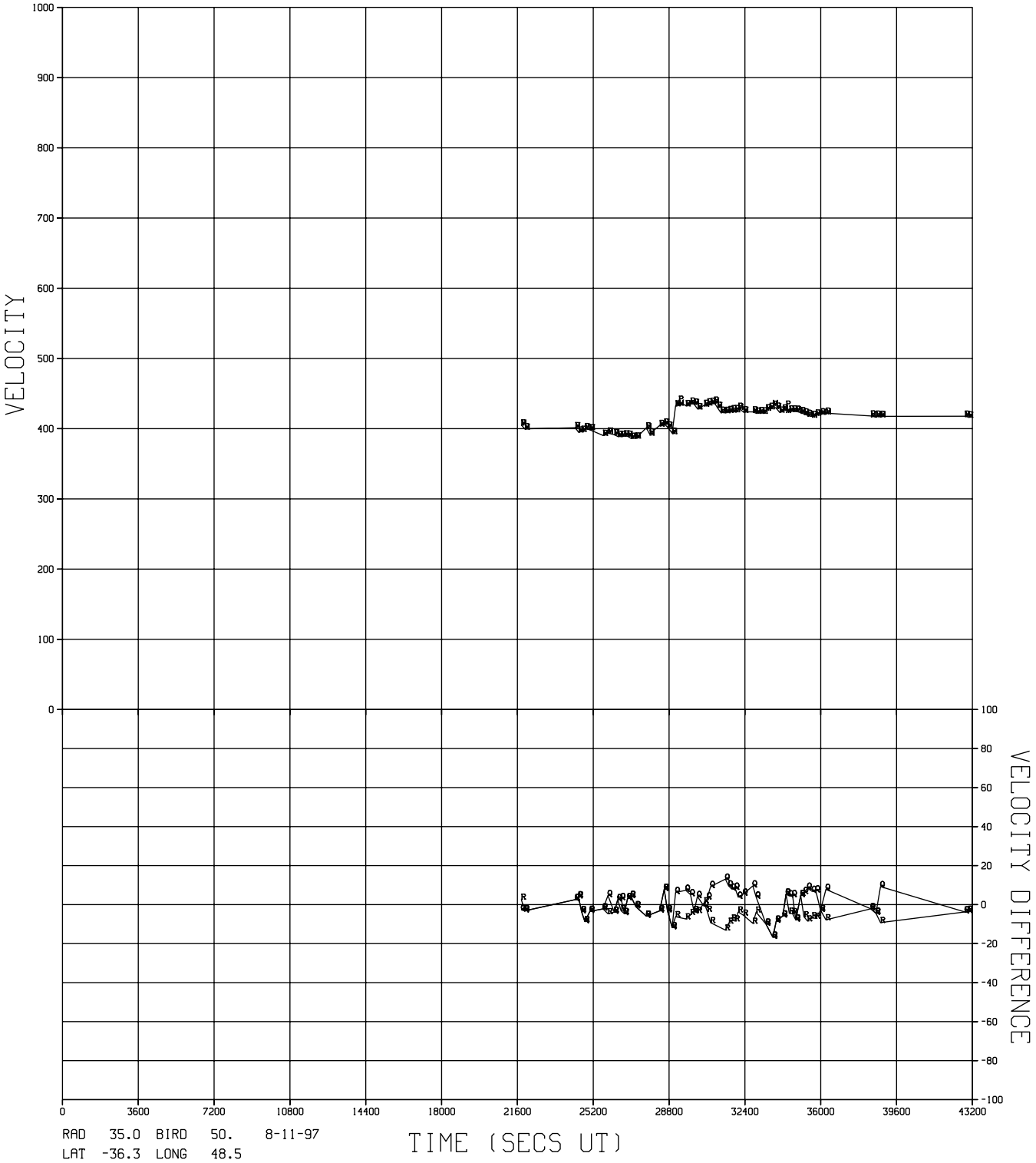
7
8
9
10
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 36.3 BIRD 50. 8-10-97
LAT -38.4 LONG 22.6

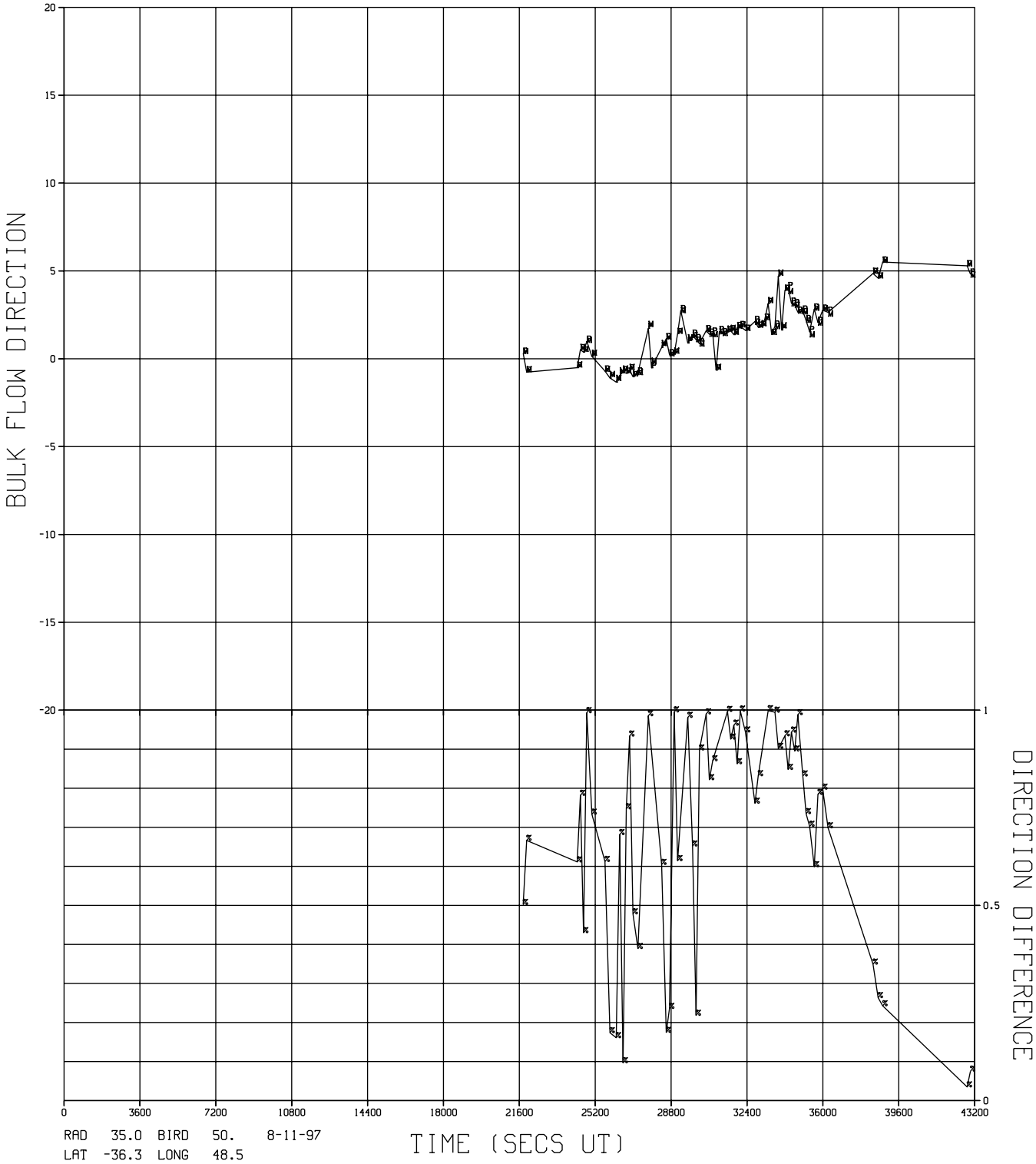

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
$10^{-1}$
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 36.3 BIRD 50. 8-10-97
LAT -38.4 LONG 22.6

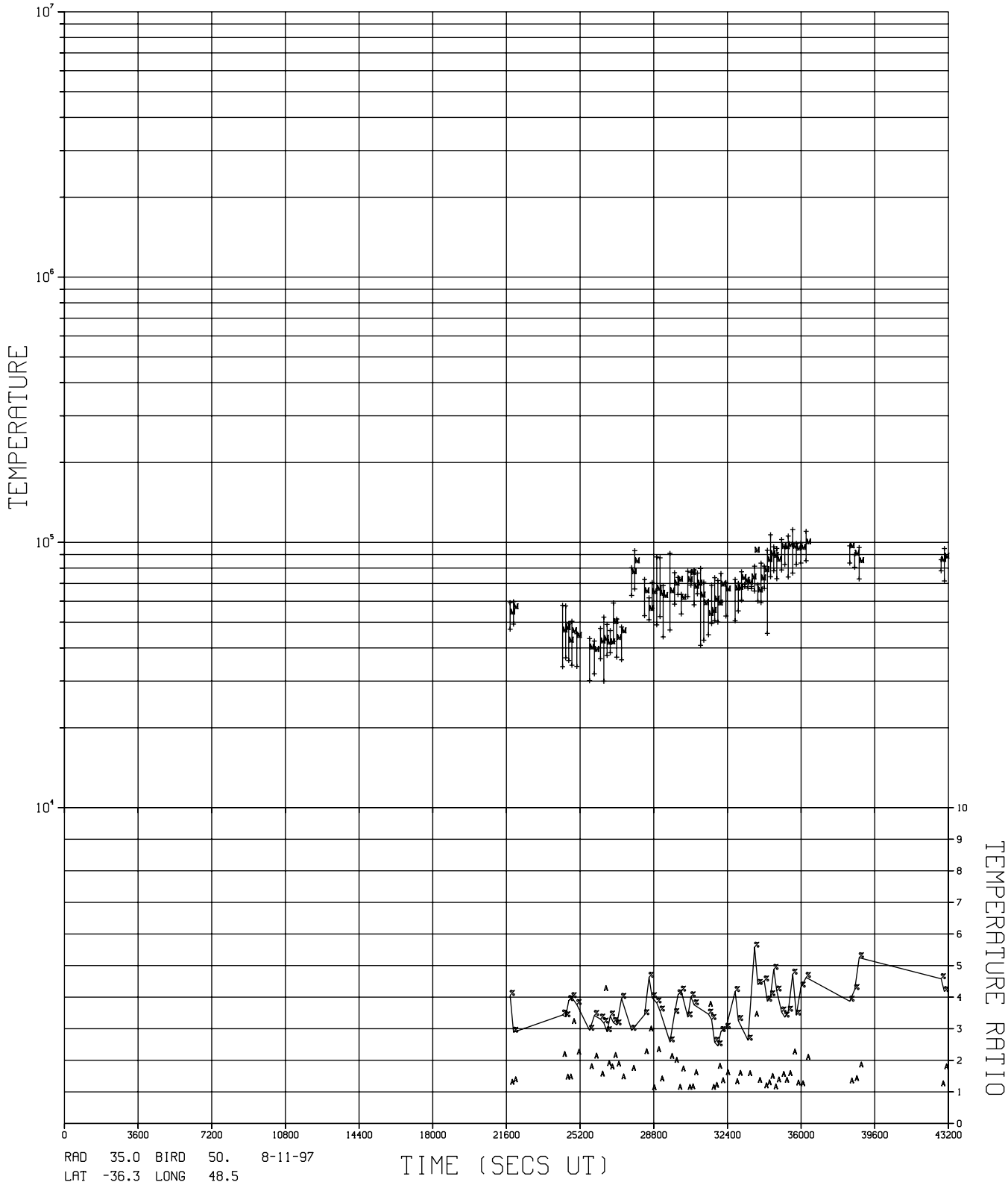

PERP. HEAT FLUX
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
$10^{-7}$
CHI-SQUARE
$10^{3}$
$10^{2}$
$10^{1}$
$10^{0}$
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 36.3 BIRD 50. 8-10-97
LAT -38.4 LONG 22.6
TIME (SECS UT)

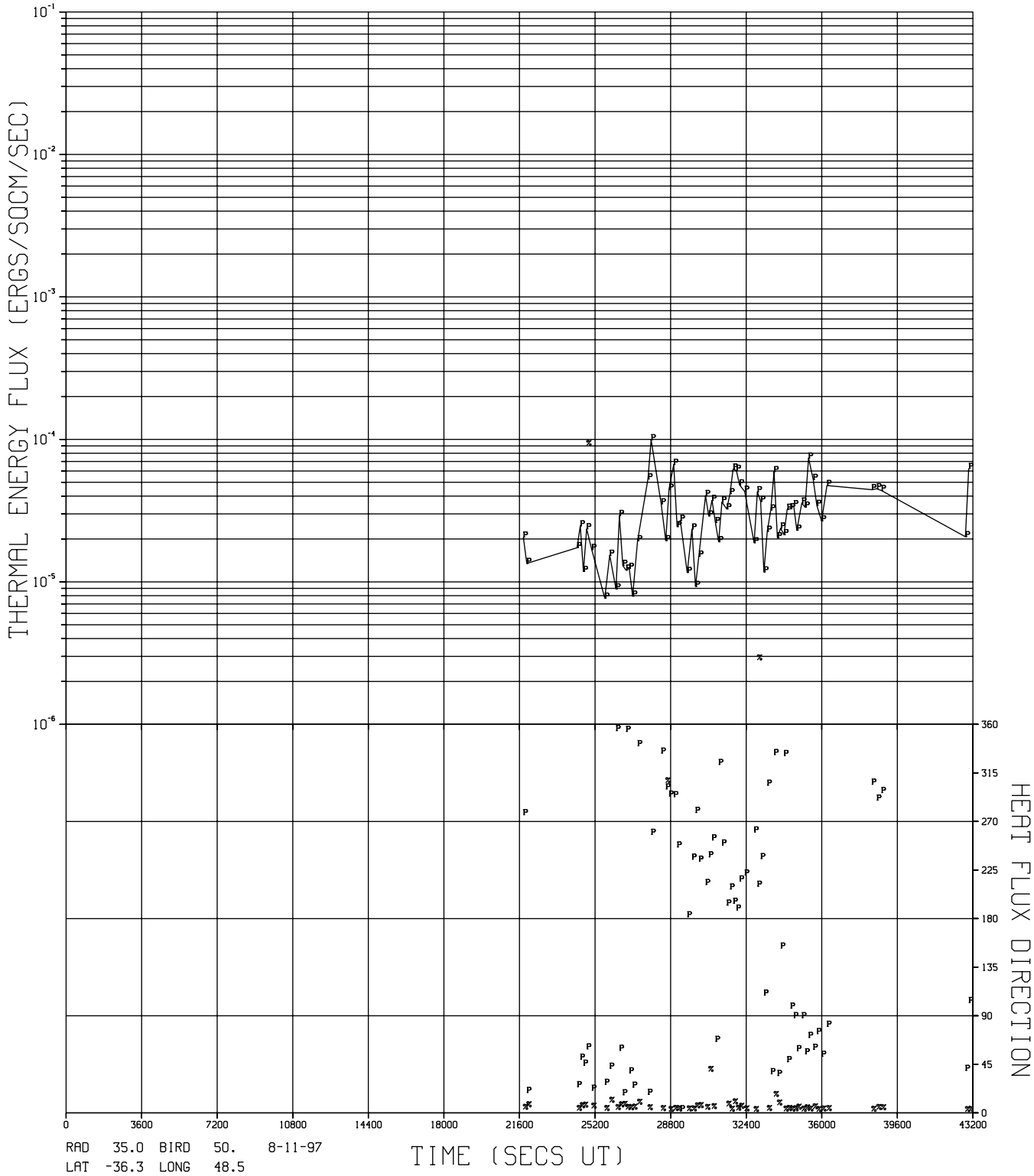

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 36.3 BIRD 50. 8-10-97
LAT -38.4 LONG 22.6
TIME (SECS UT)

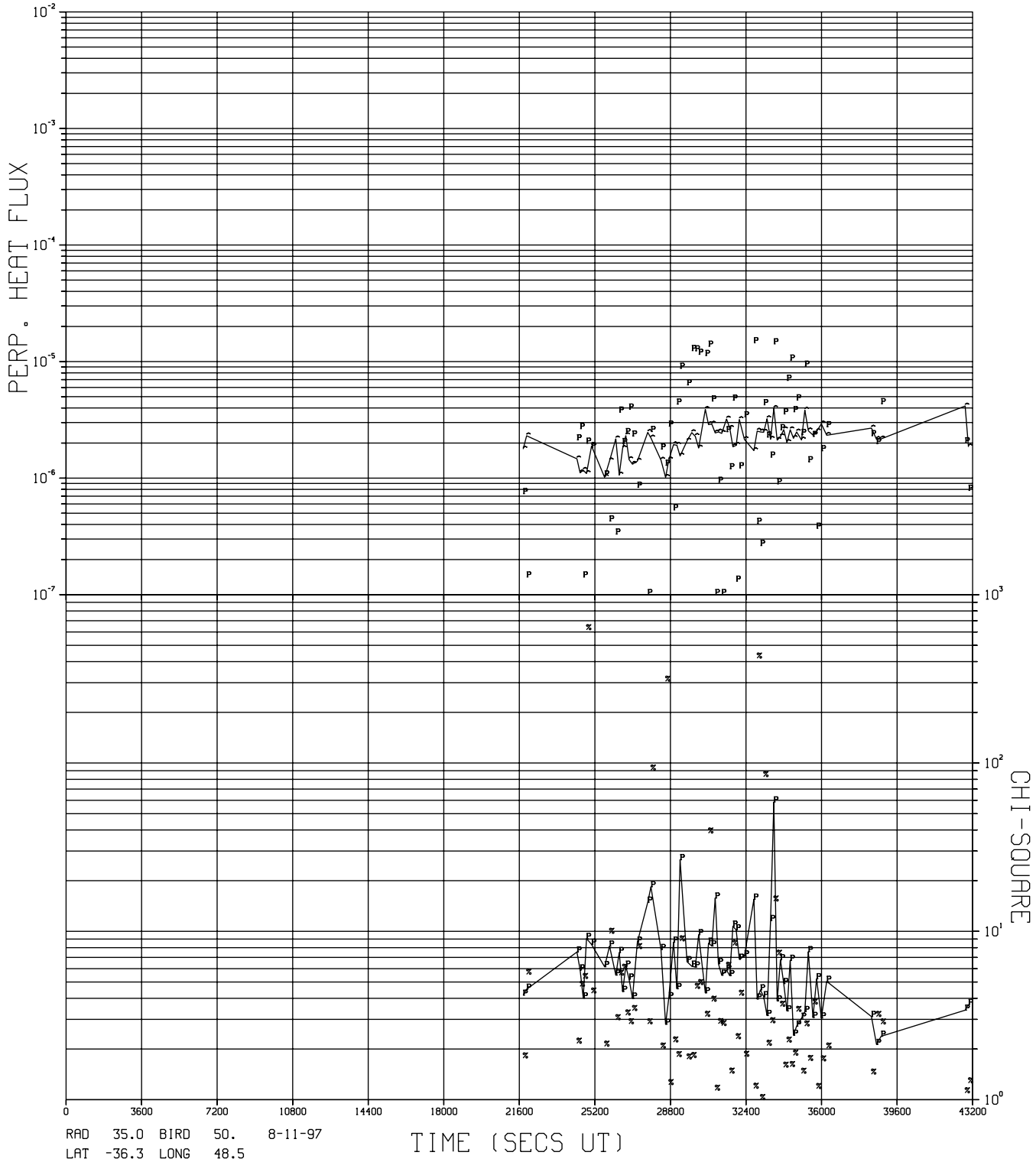

DENSITY
$10^2$
$10^1$
$10^0$
$10^{-1}$
DENSITY RATIO
$10^0$
$10^{-1}$
$10^{-2}$
$10^{-3}$
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
RAD 35.0 BIRD 50. 8-11-97
LAT -36.3 LONG 48.5
TIME (SECS UT)


VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 35.0 BIRD 50. 8-11-97
LAT -36.3 LONG 48.5


BULK FLOW DIRECTION
20
15
10
5
0
-5
-10
-15
-20
DIRECTION DIFFERENCE
1
0.5
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 35.0 BIRD 50. 8-11-97
LAT -36.3 LONG 48.5


TEMPERATURE
$10^7$
$10^6$
$10^5$
$10^4$
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 35.0 BIRD 50. 8-11-97
LAT -36.3 LONG 48.5


THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
$10^{-1}$
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 35.0 BIRD 50. 8-11-97
LAT -36.3 LONG 48.5


PERP. HEAT FLUX
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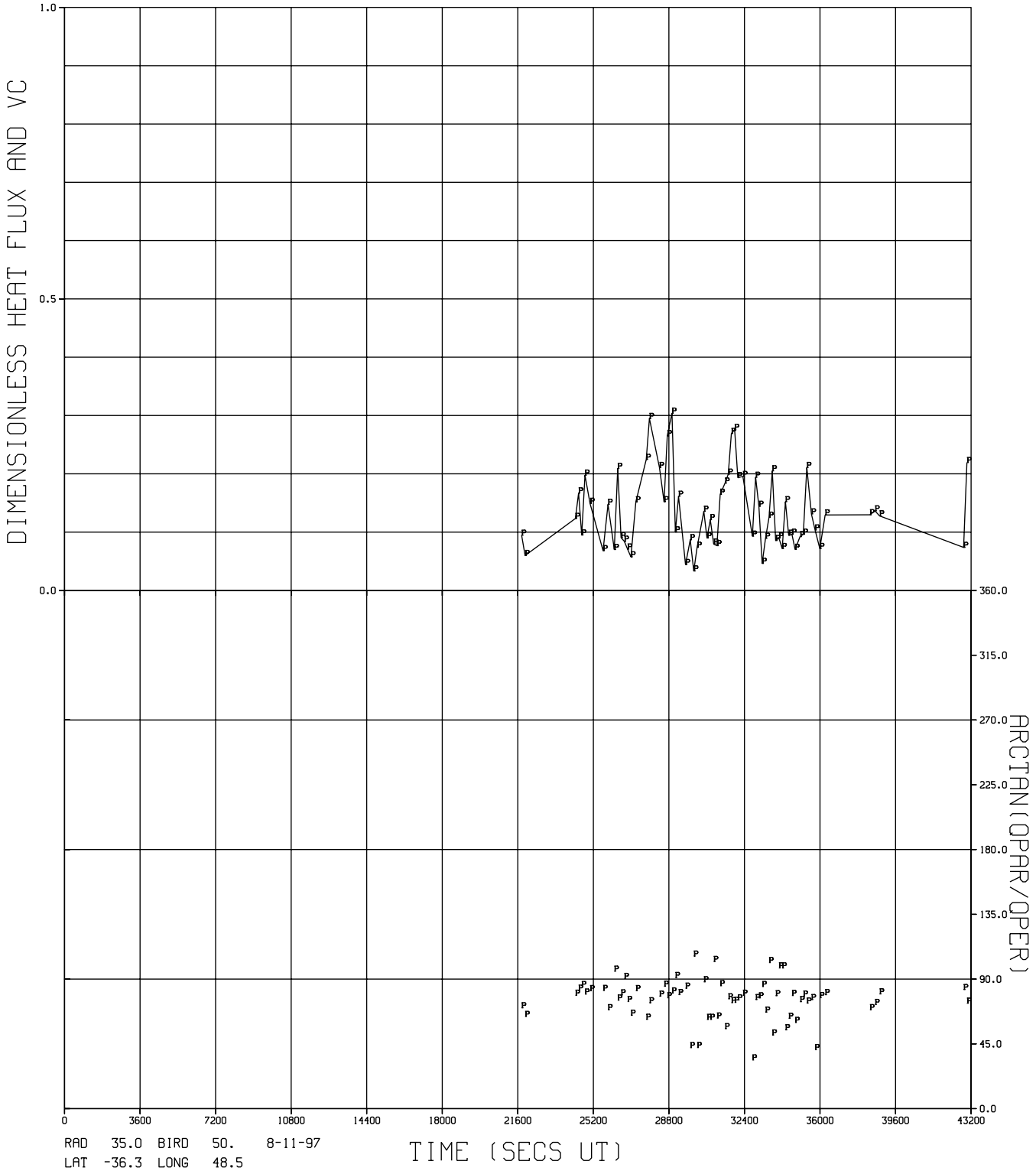
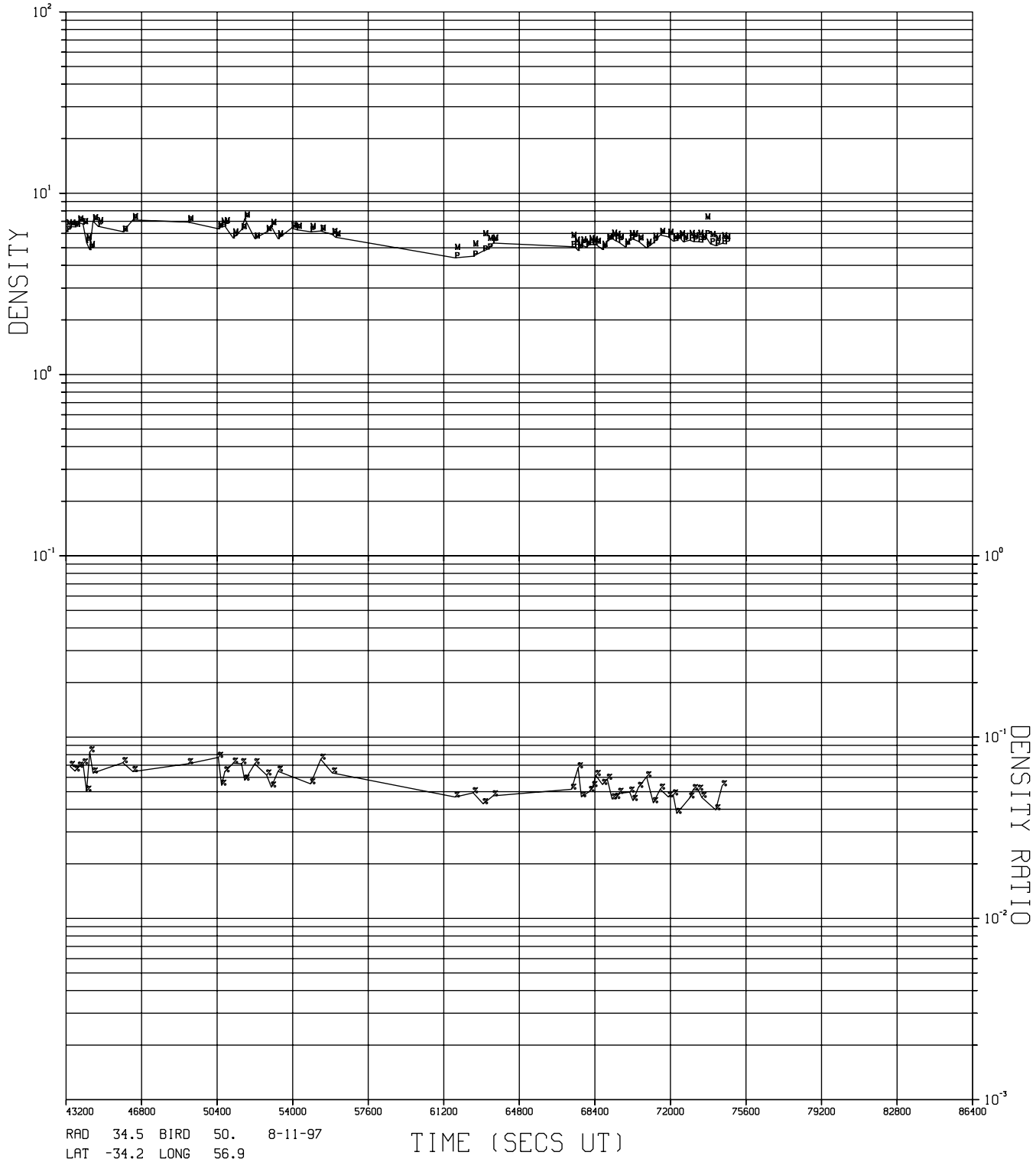
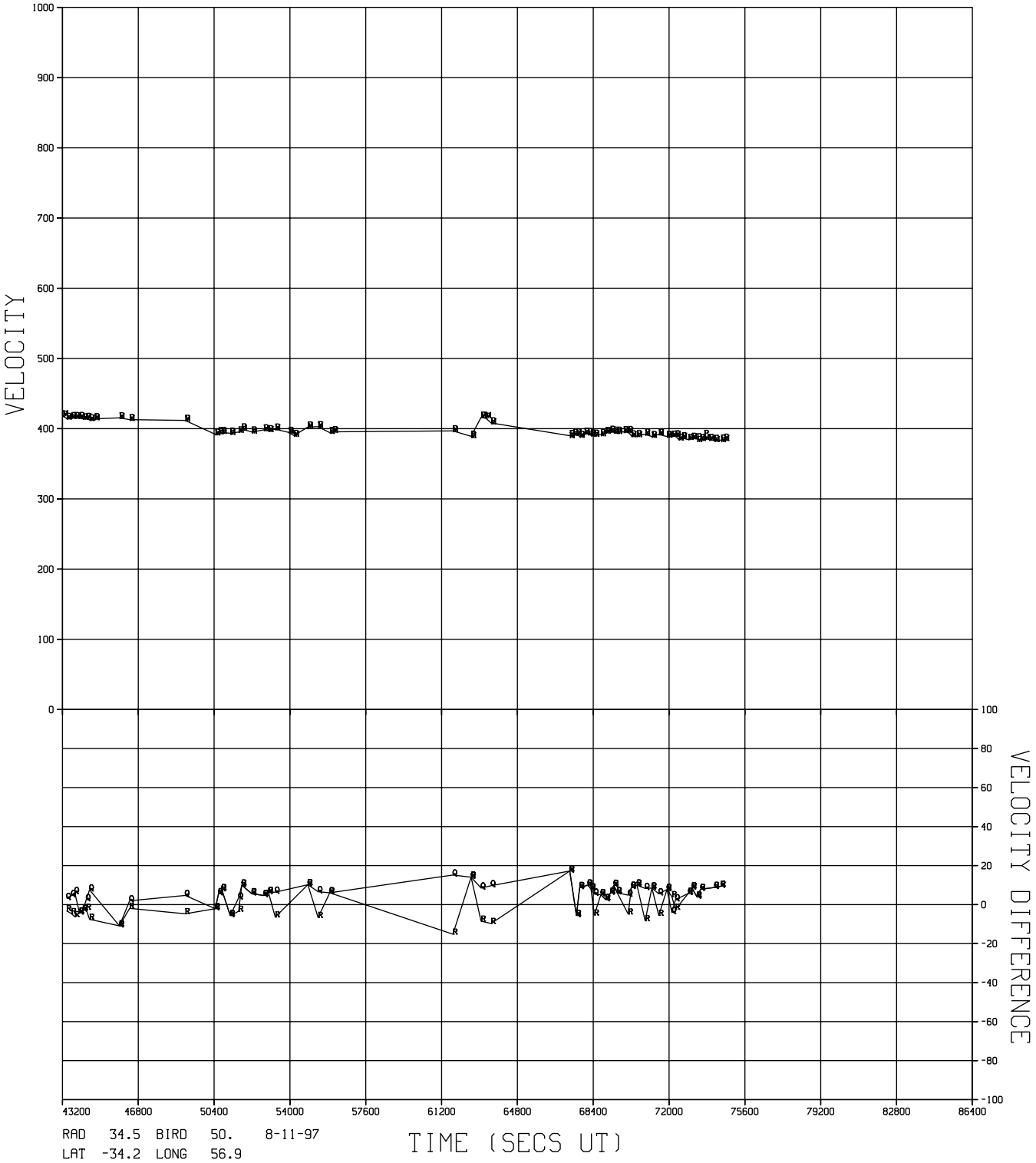
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
$10^{-7}$
$10^{3}$
$10^{2}$
$10^{1}$
$10^{0}$
CHI-SQUARE
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 35.0 BIRD 50. 8-11-97
LAT -36.3 LONG 48.5


DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 35.0 BIRD 50. 8-11-97
LAT -36.3 LONG 48.5


DENSITY
$10^{2}$
$10^{1}$
$10^{0}$
$10^{-1}$
DENSITY RATIO
$10^{0}$
$10^{-1}$
$10^{-2}$
$10^{-3}$
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 34.5 BIRD 50. 8-11-97
LAT -34.2 LONG 56.9
TIME (SECS UT)


VELOCITY
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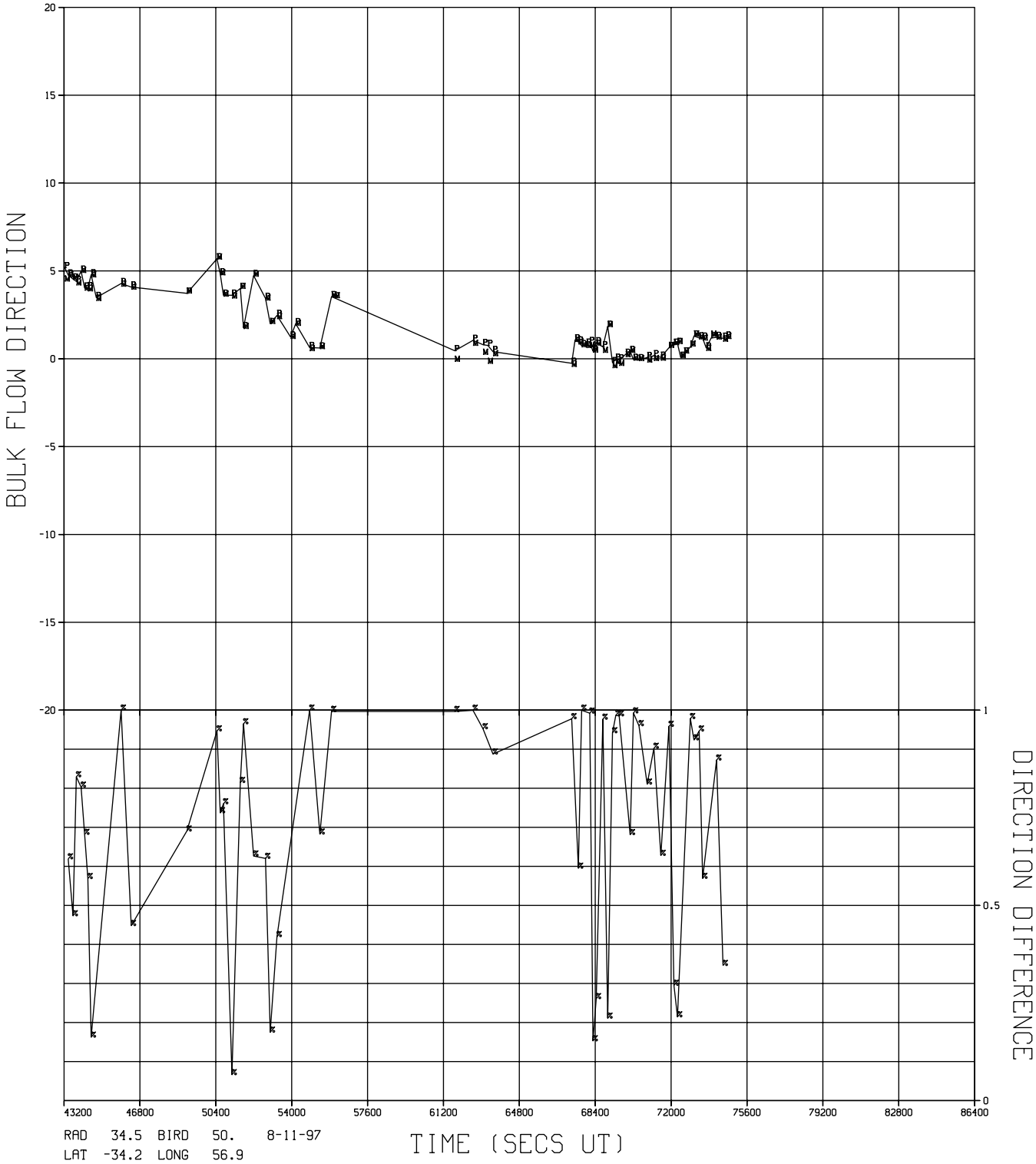
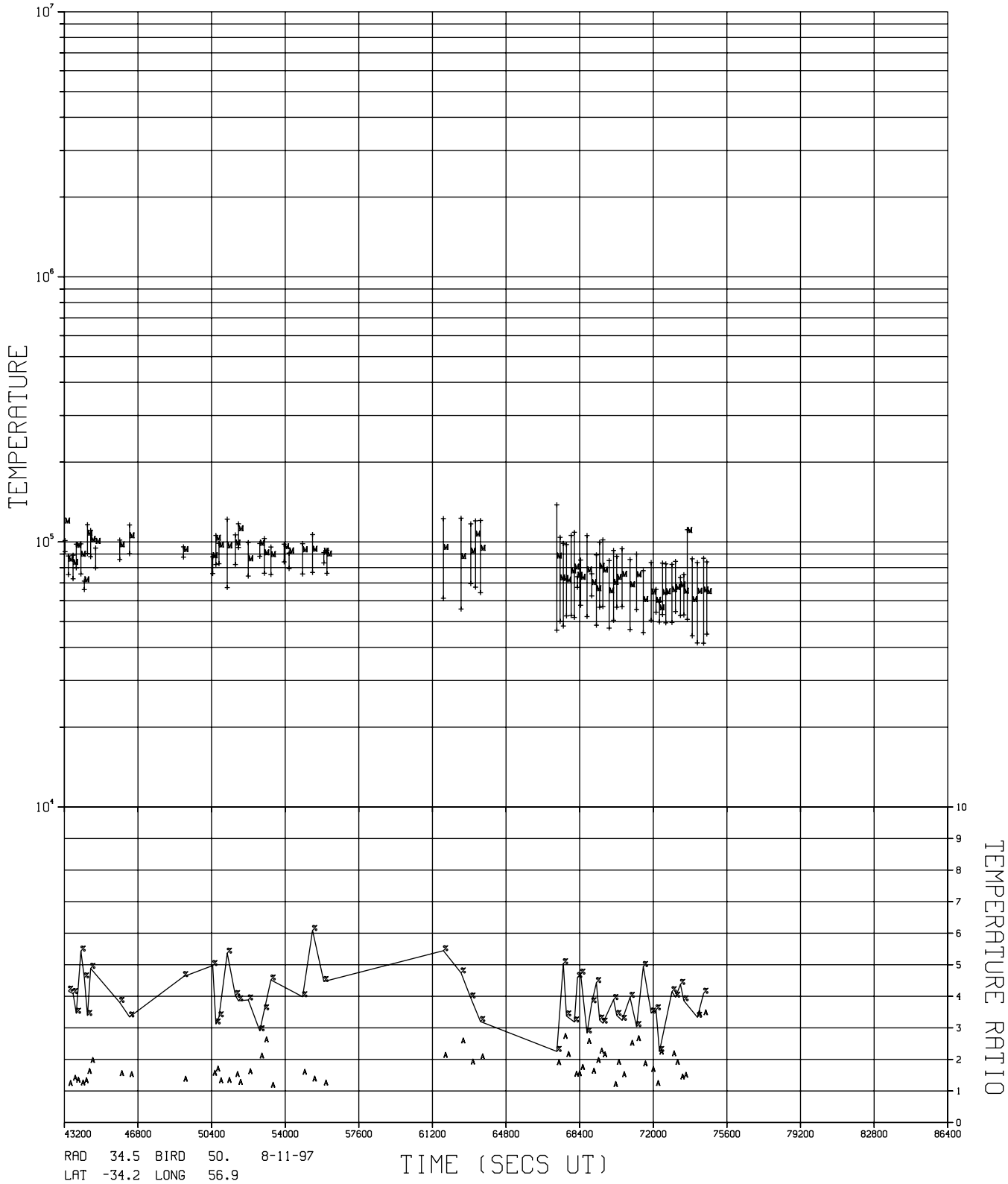
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 34.5 BIRD 50. 8-11-97
LAT -34.2 LONG 56.9


BULK FLOW DIRECTION
20
15
10
5
0
-5
-10
-15
-20
DIRECTION DIFFERENCE
1
0.5
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 34.5 BIRD 50. 8-11-97
LAT -34.2 LONG 56.9


TEMPERATURE
$10^7$
$10^6$
$10^5$
$10^4$
TEMPERATURE RATIO
0
1
2
3
4
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6
7
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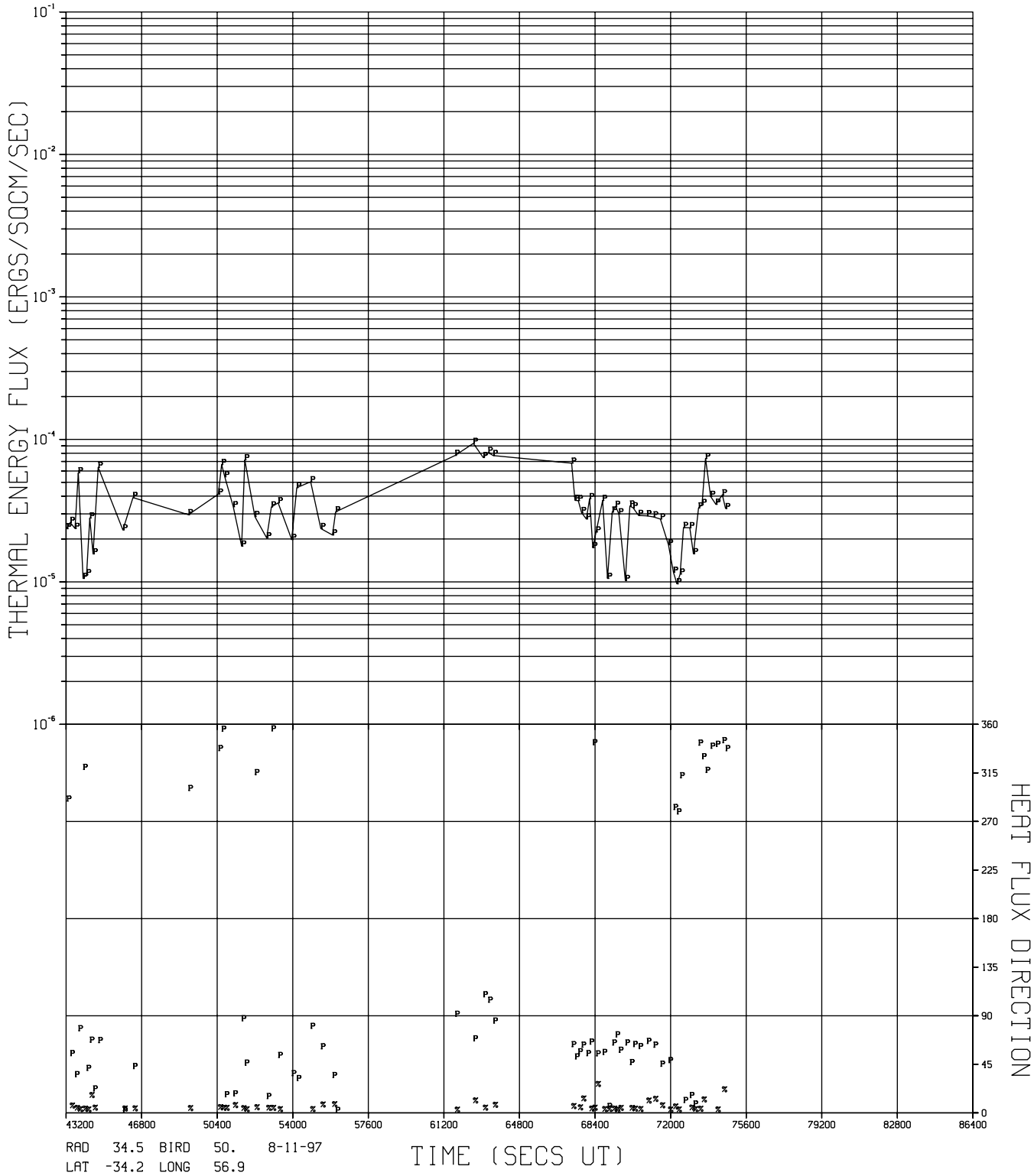
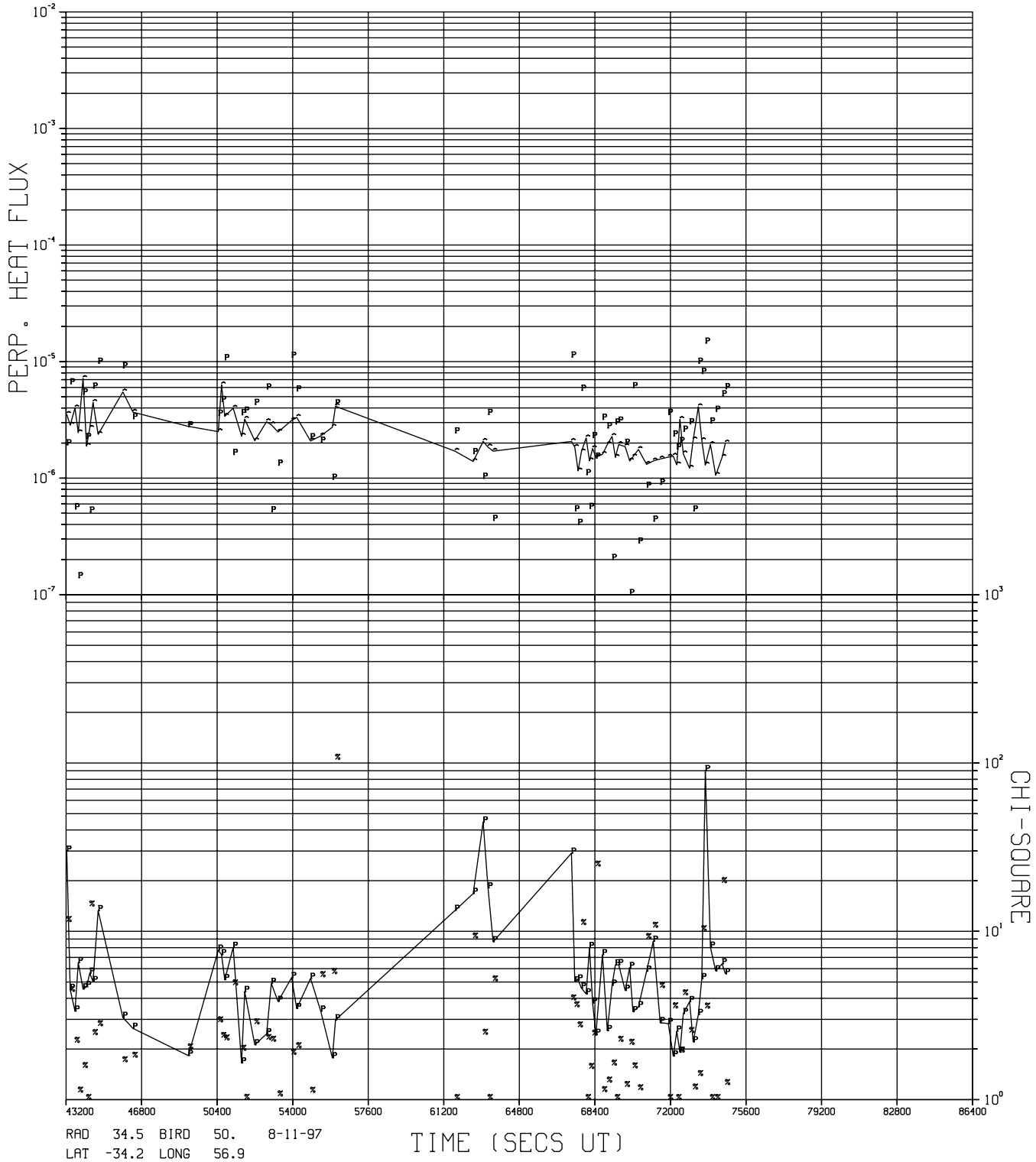
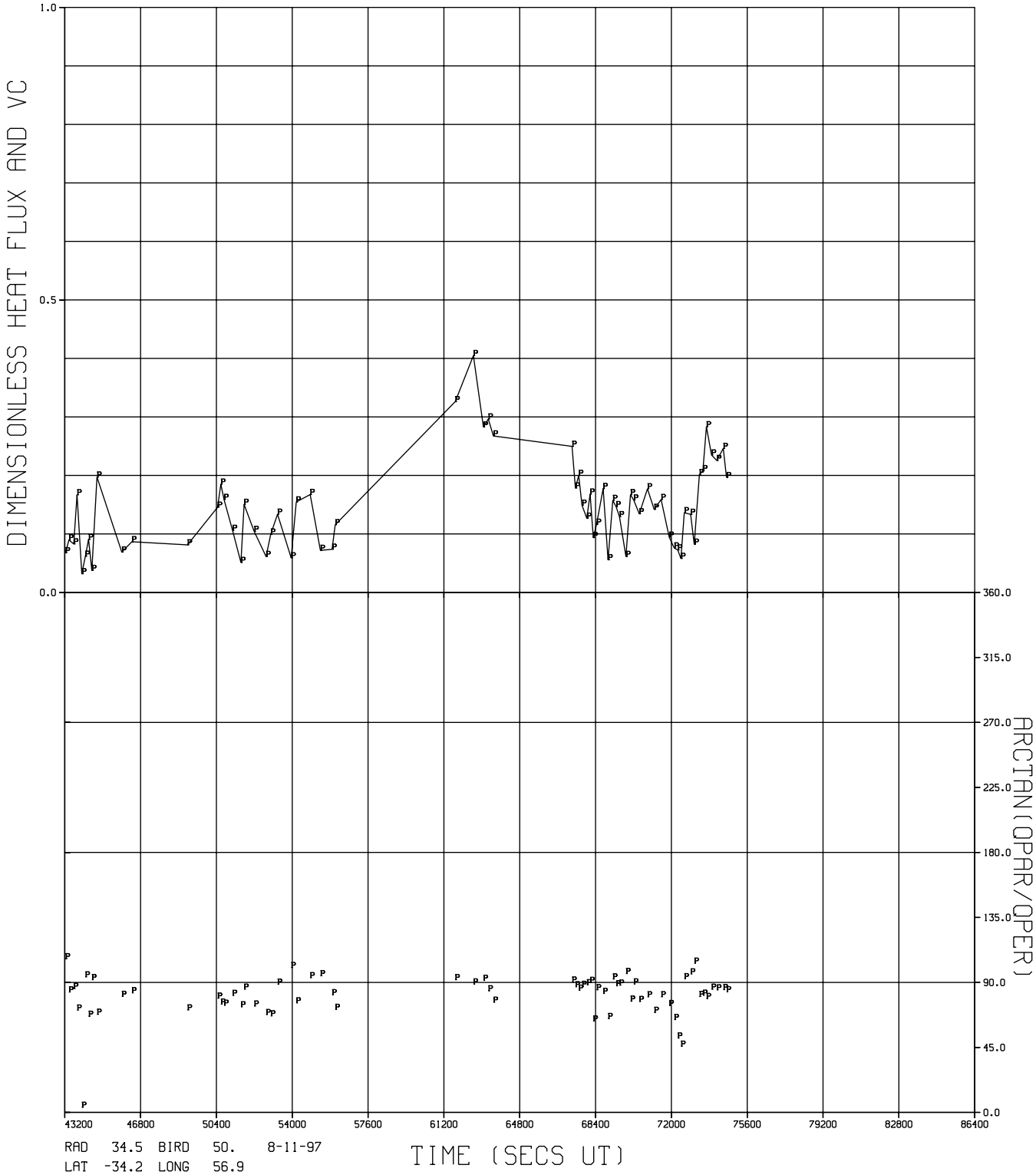
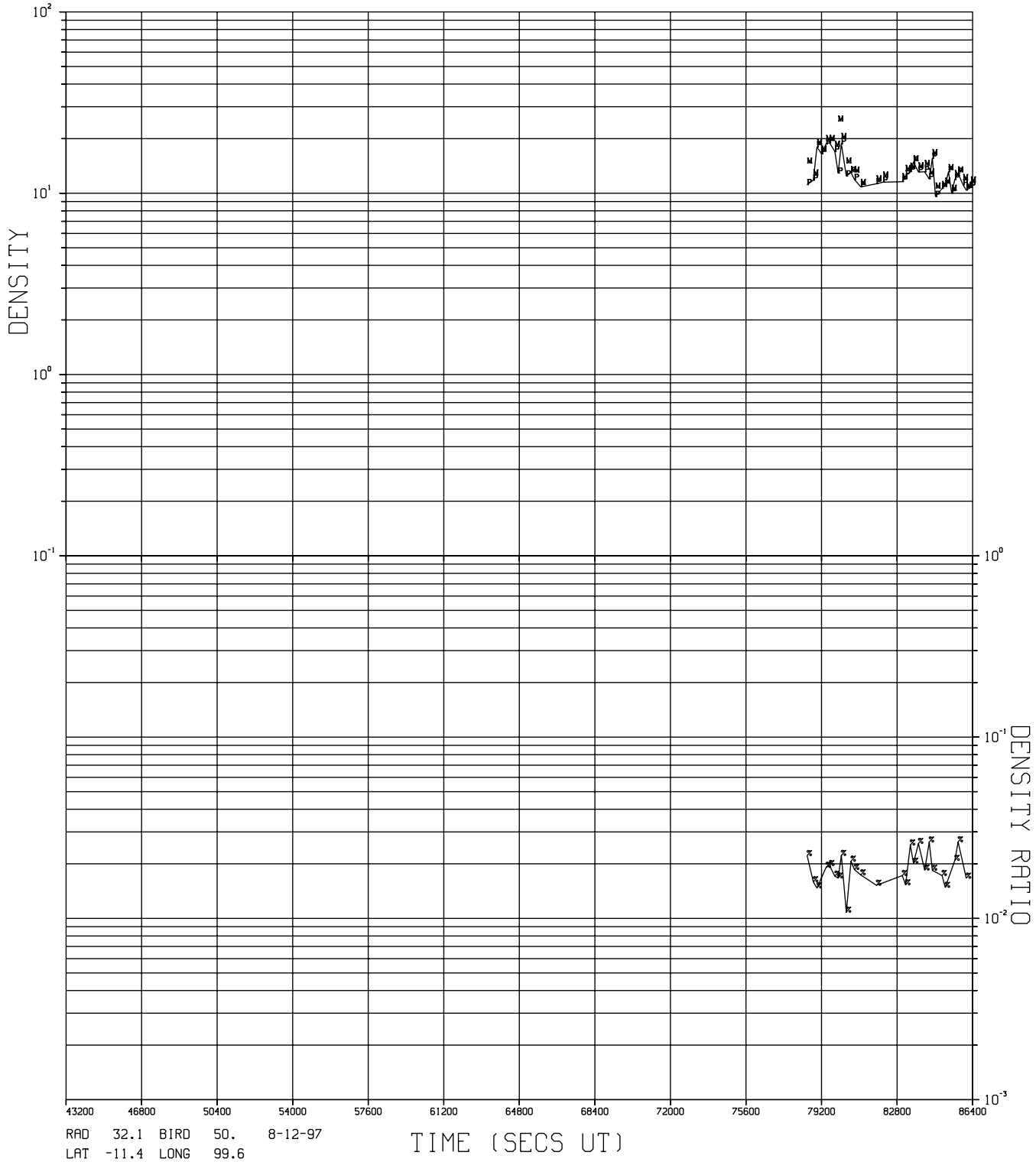
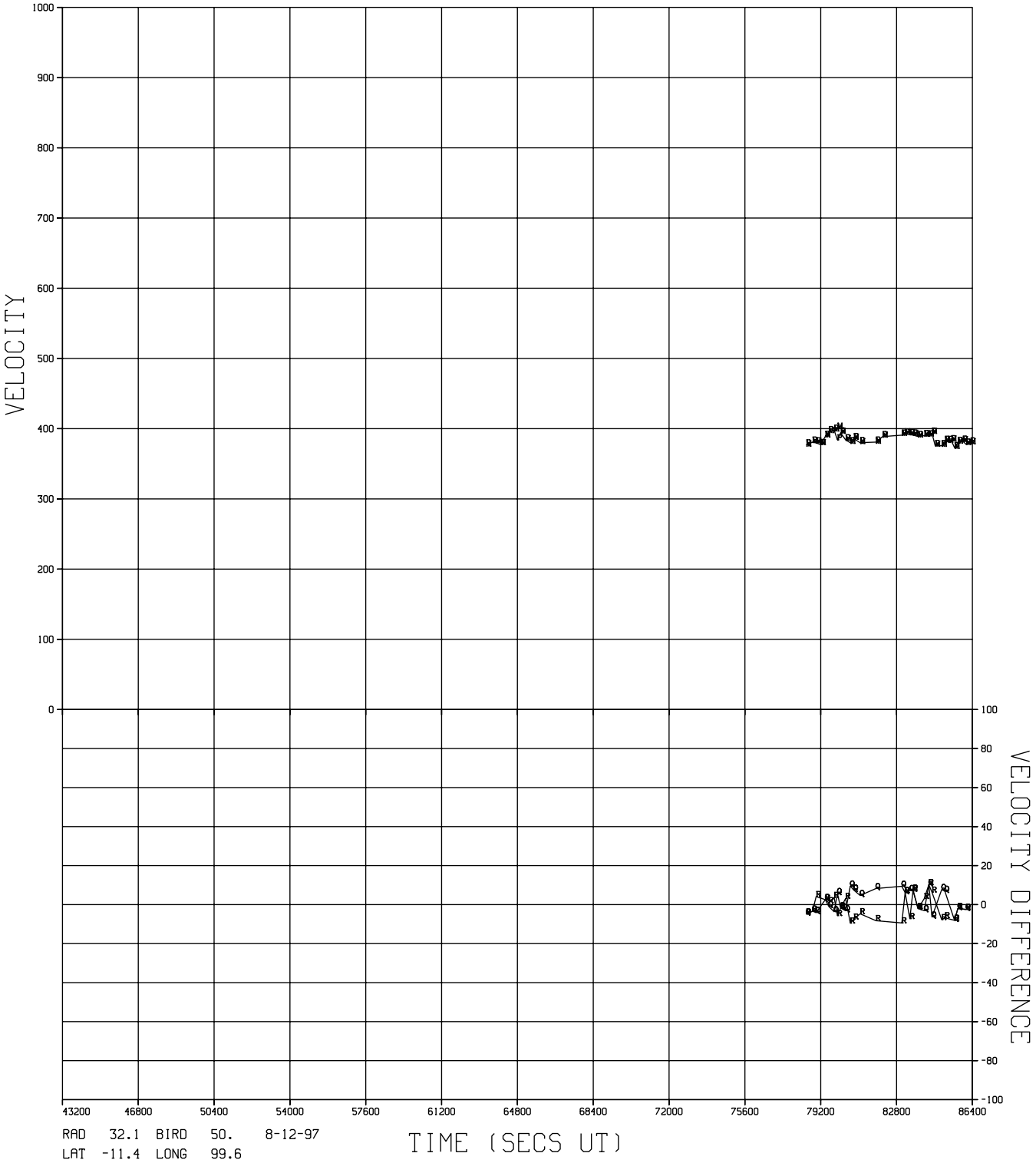
9
10
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 34.5 BIRD 50. 8-11-97
LAT -34.2 LONG 56.9

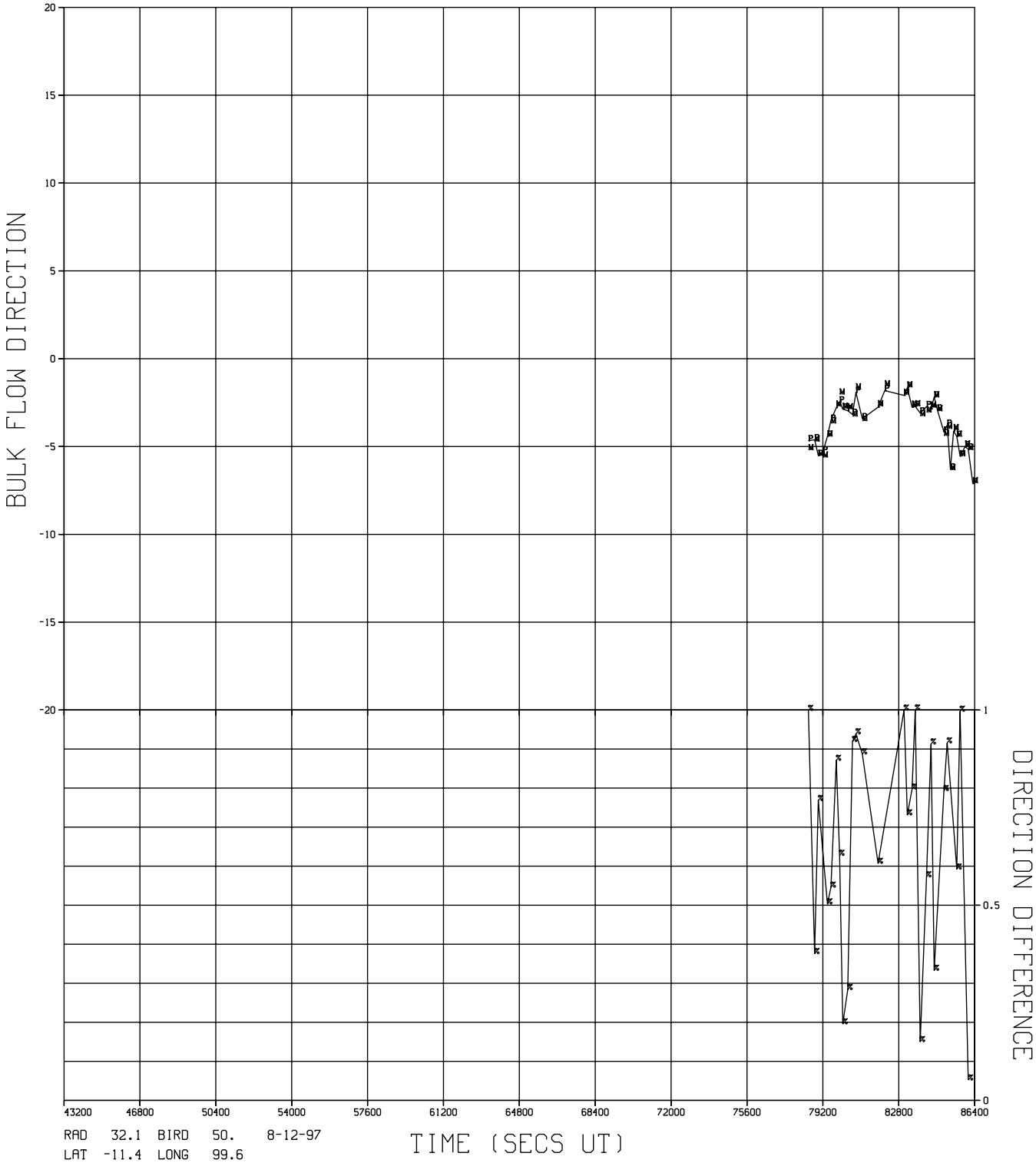

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
$10^{-1}$
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 34.5 BIRD 50. 8-11-97
LAT -34.2 LONG 56.9

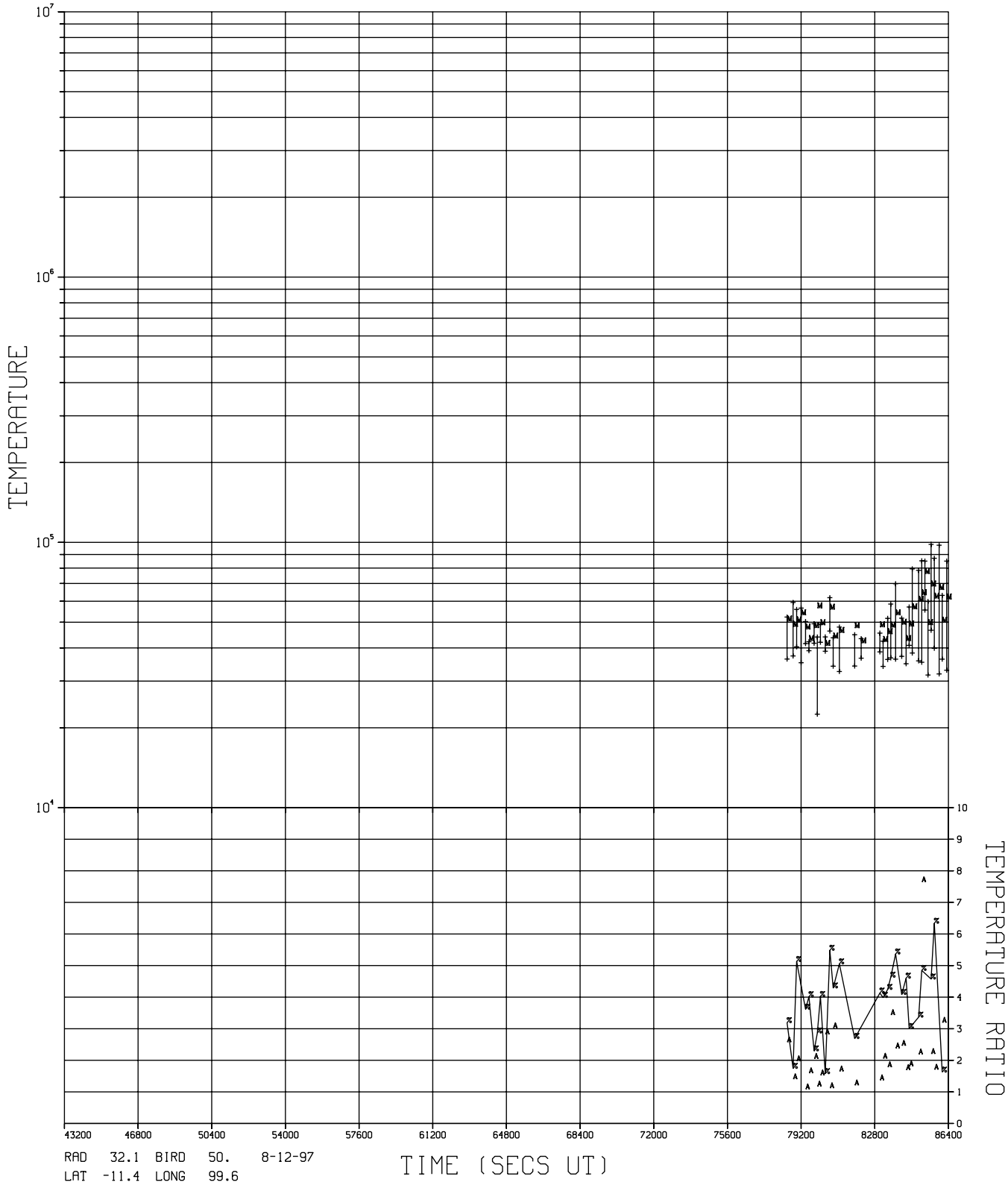

PERP. HEAT FLUX
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
$10^{-7}$
CHI-SQUARE
$10^{3}$
$10^{2}$
$10^{1}$
$10^{0}$
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 34.5 BIRD 50. 8-11-97
LAT -34.2 LONG 56.9
TIME (SECS UT)

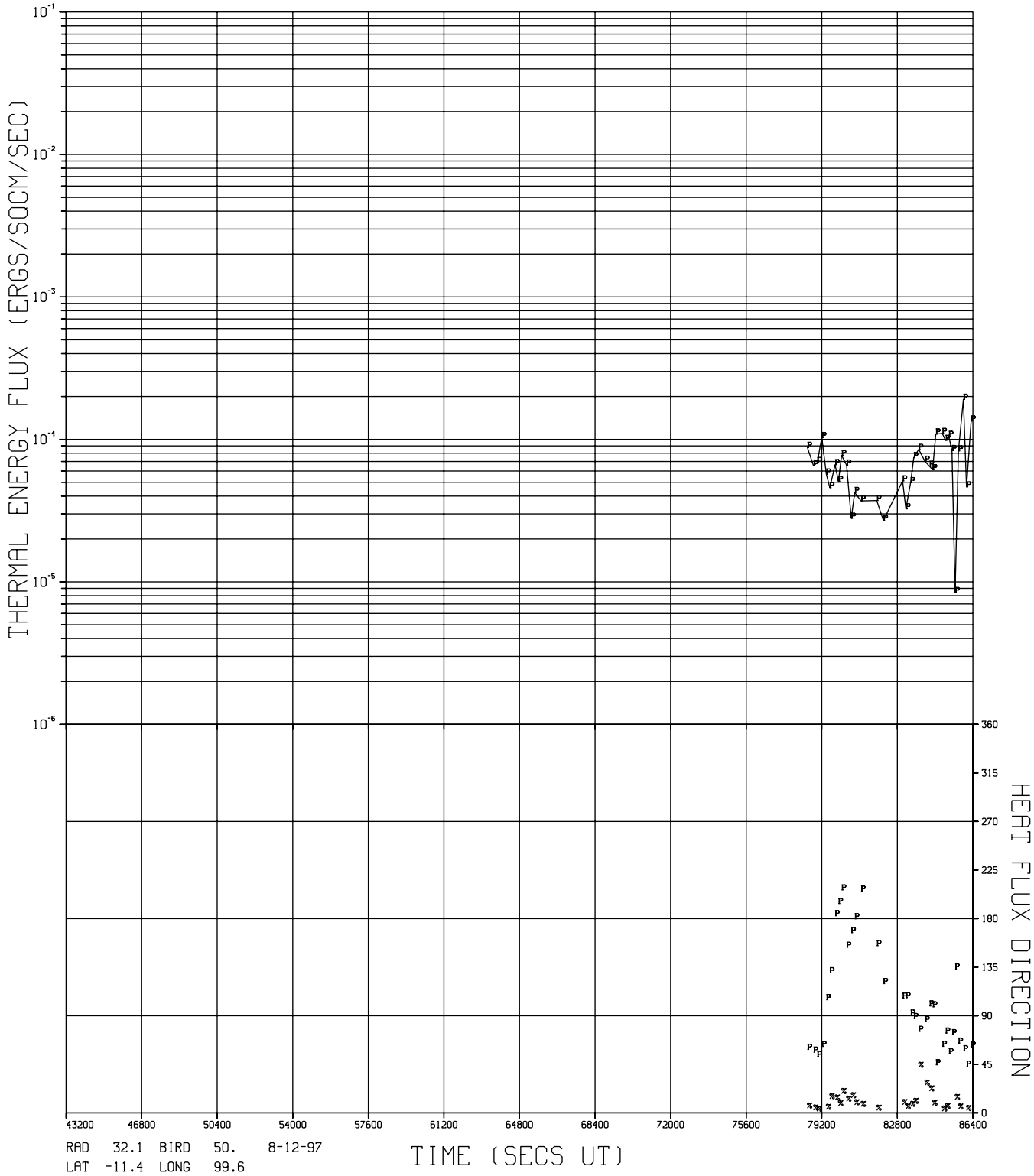

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 34.5 BIRD 50. 8-11-97
LAT -34.2 LONG 56.9

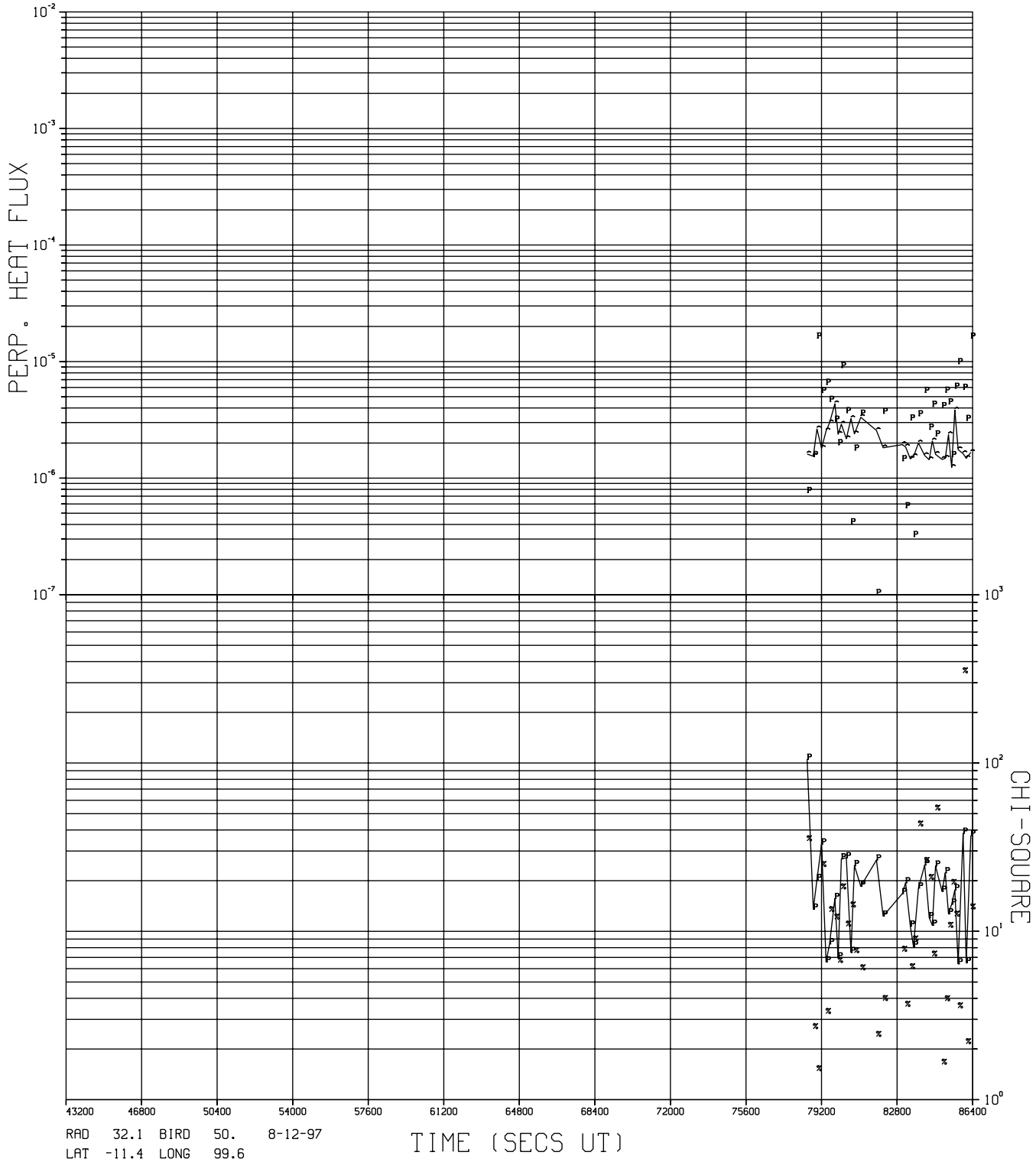

DENSITY
$10^2$
$10^1$
$10^0$
$10^{-1}$
DENSITY RATIO
$10^0$
$10^{-1}$
$10^{-2}$
$10^{-3}$
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 32.1 BIRD 50. 8-12-97
LAT -11.4 LONG 99.6

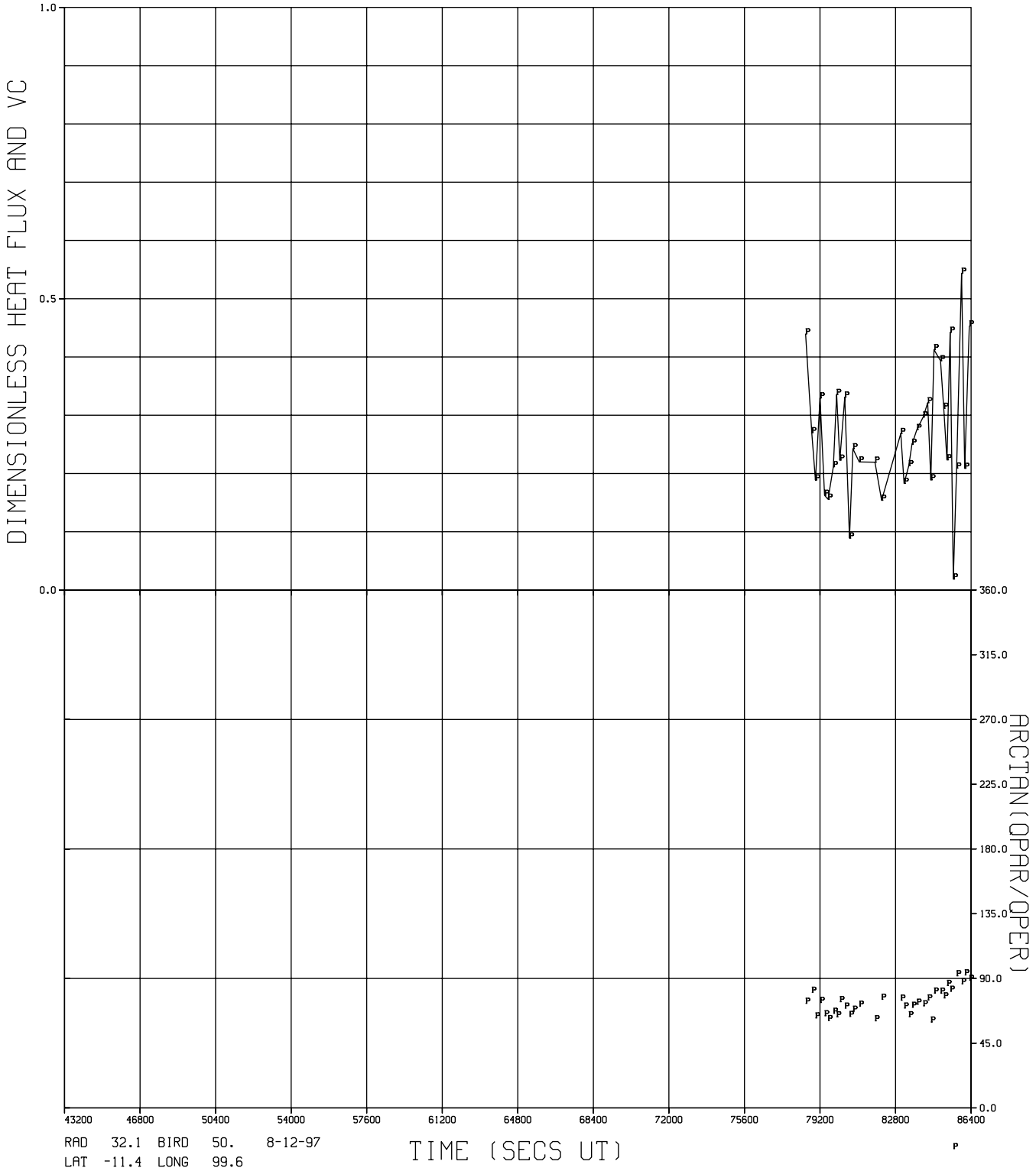

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 32.1 BIRD 50. 8-12-97
LAT -11.4 LONG 99.6

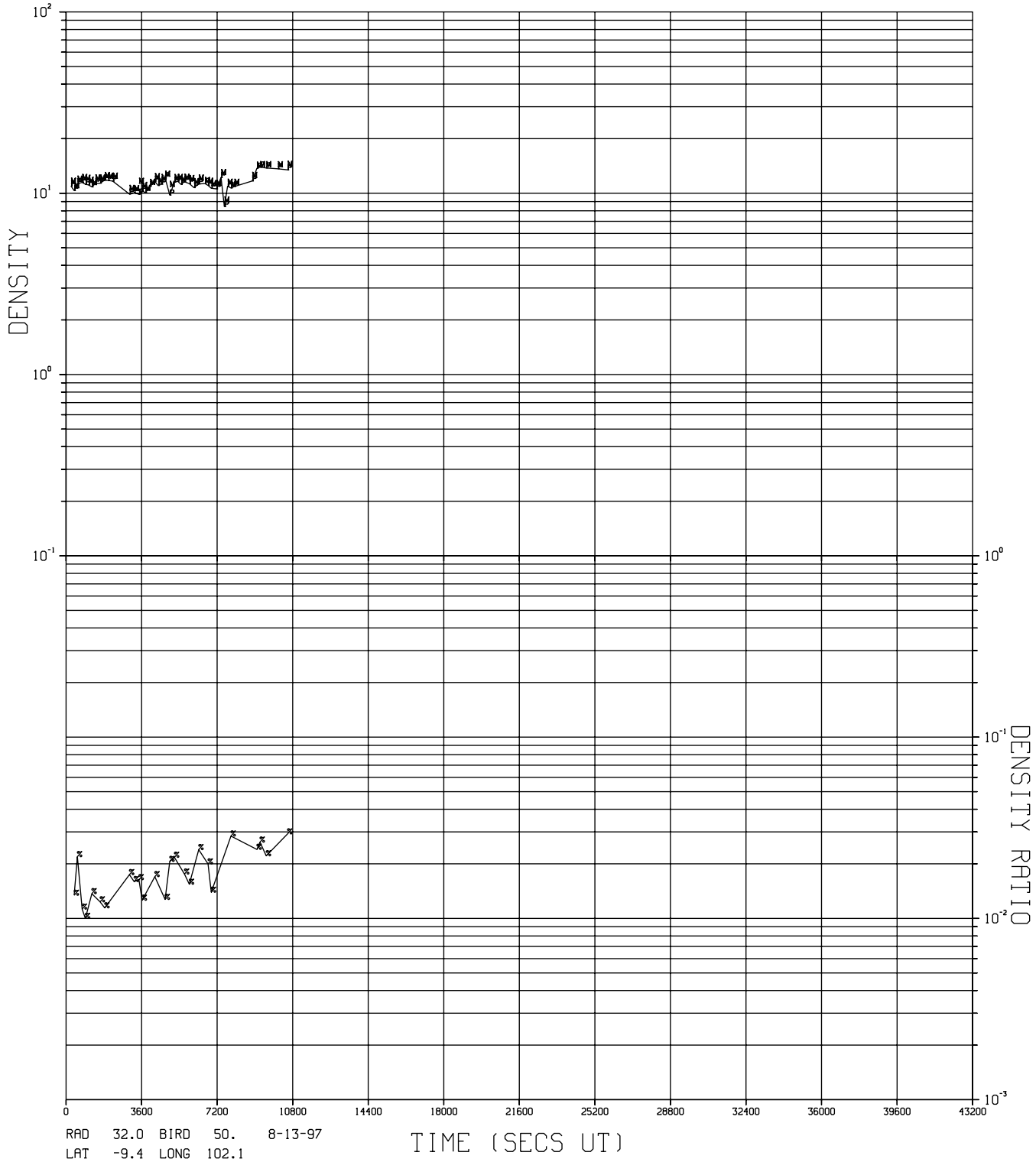

BULK FLOW DIRECTION
20
15
10
5
0
-5
-10
-15
-20
DIRECTION DIFFERENCE
1
0.5
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 32.1 BIRD 50. 8-12-97
LAT -11.4 LONG 99.6

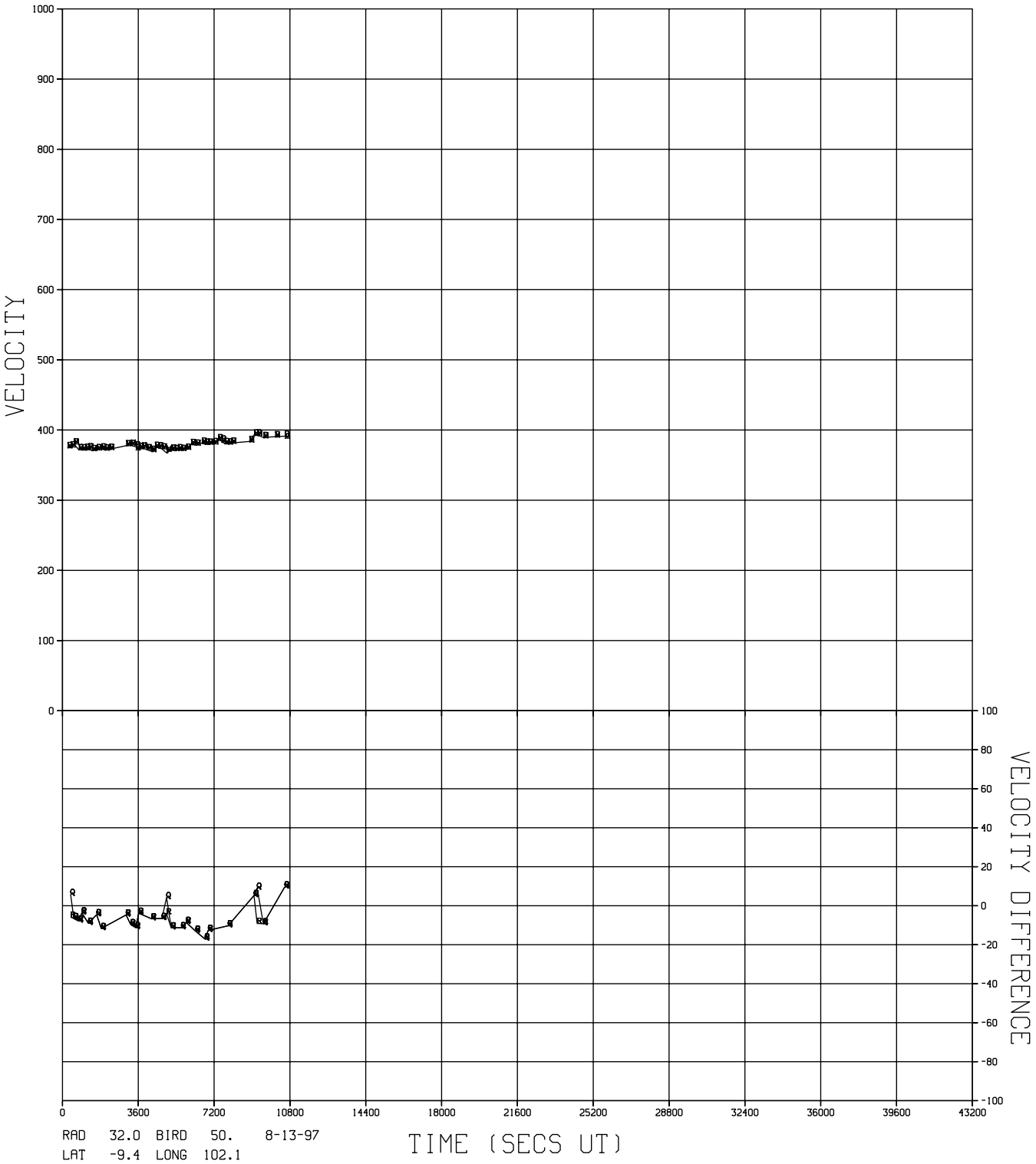

TEMPERATURE
$10^7$
$10^6$
$10^5$
$10^4$
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 32.1 BIRD 50. 8-12-97
LAT -11.4 LONG 99.6

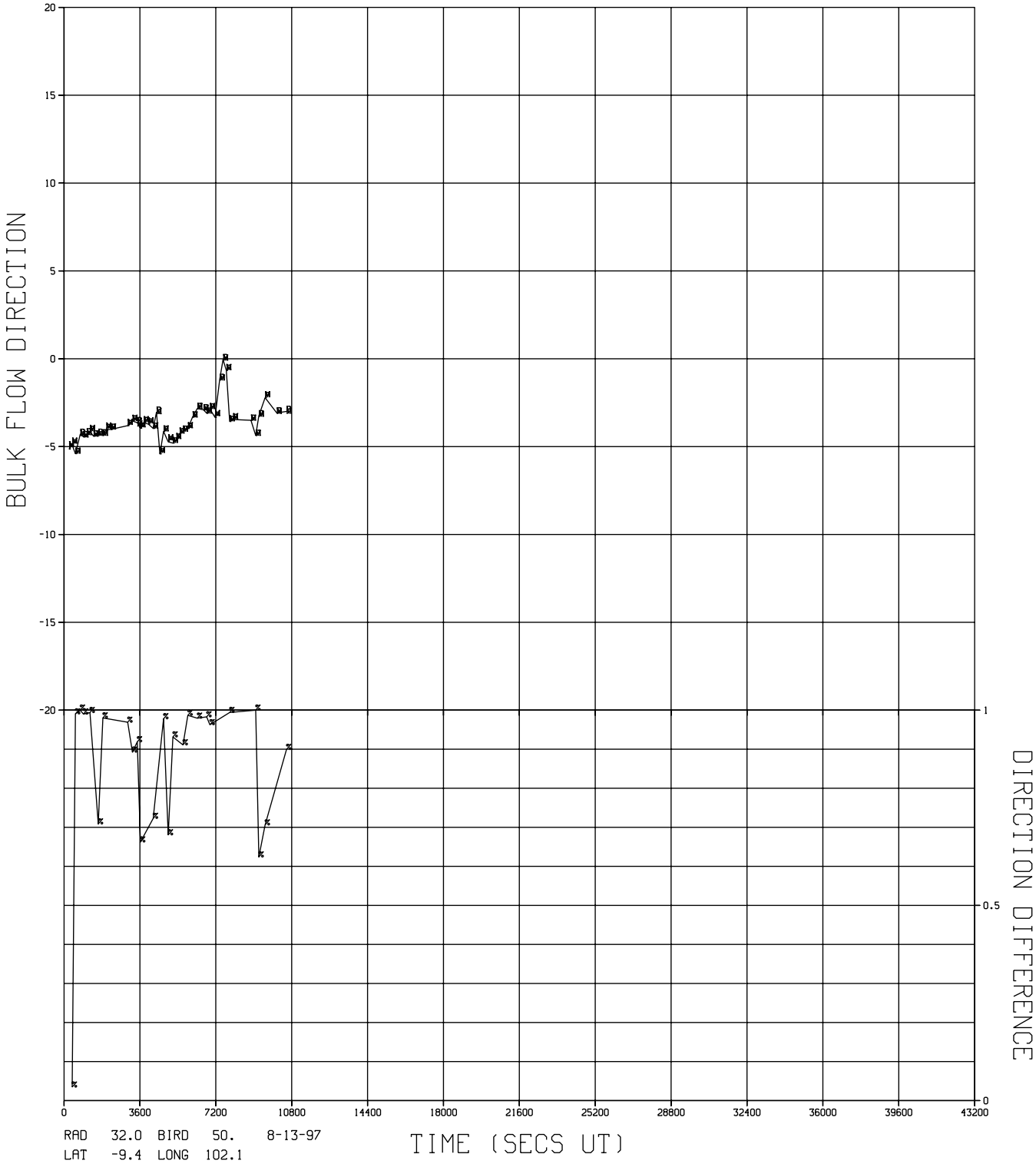

THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
$10^{-1}$
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 32.1 BIRD 50. 8-12-97
LAT -11.4 LONG 99.6

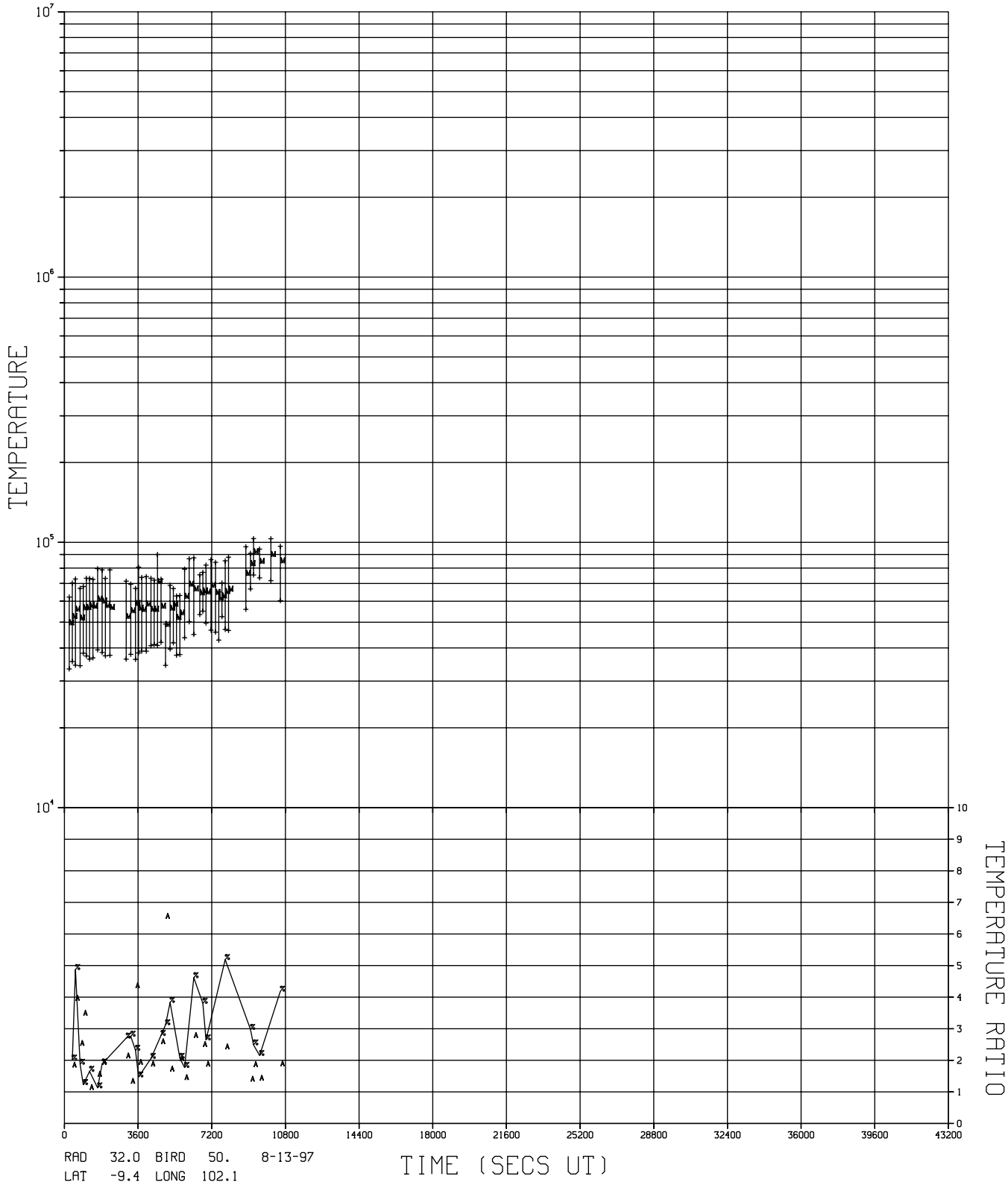

PERP. HEAT FLUX
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
$10^{-7}$
CHI-SQUARE
$10^{3}$
$10^{2}$
$10^{1}$
$10^{0}$
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
RAD 32.1 BIRD 50. 8-12-97
LAT -11.4 LONG 99.6
TIME (SECS UT)

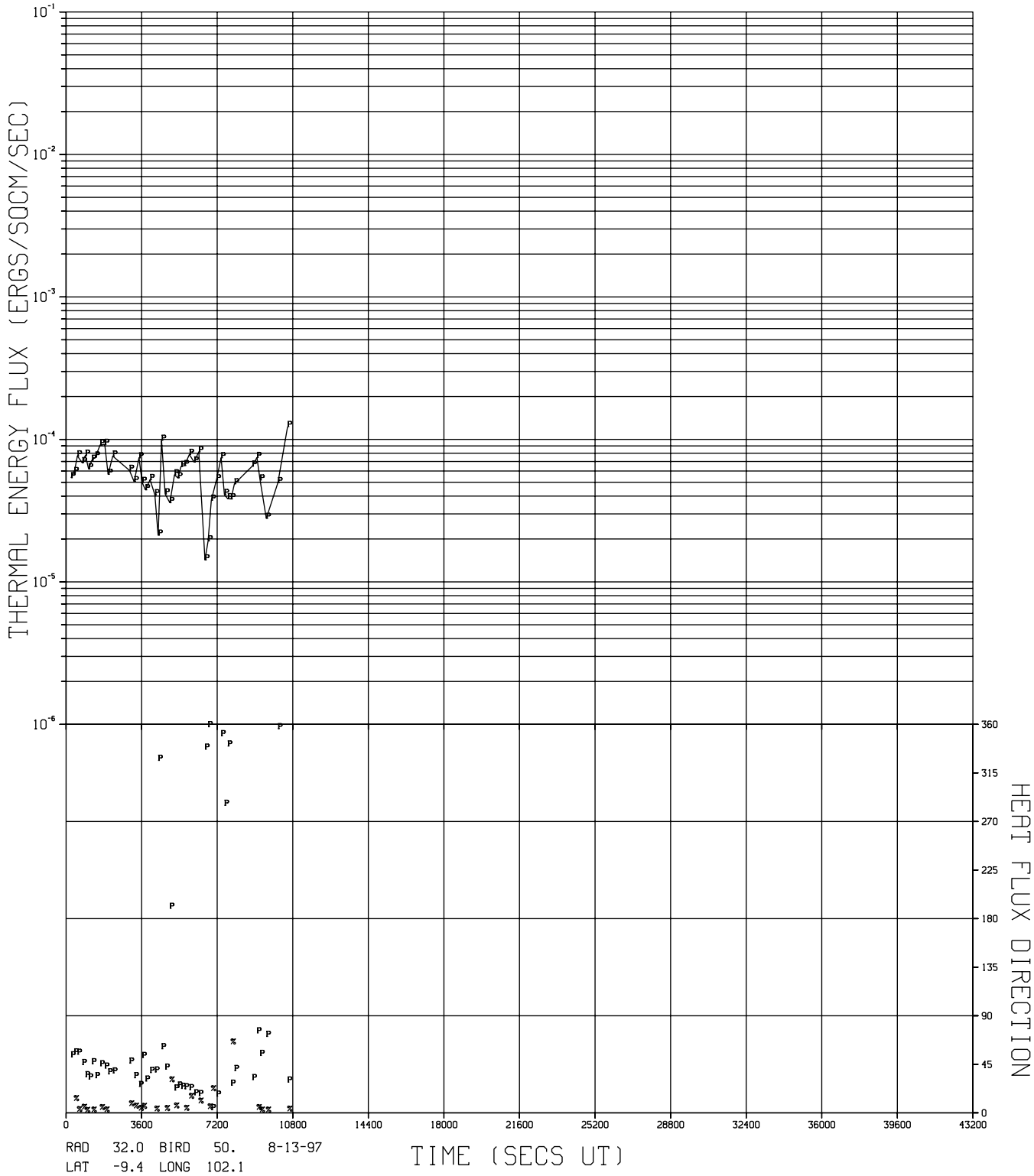

DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
43200
46800
50400
54000
57600
61200
64800
68400
72000
75600
79200
82800
86400
TIME (SECS UT)
RAD 32.1 BIRD 50. 8-12-97
LAT -11.4 LONG 99.6

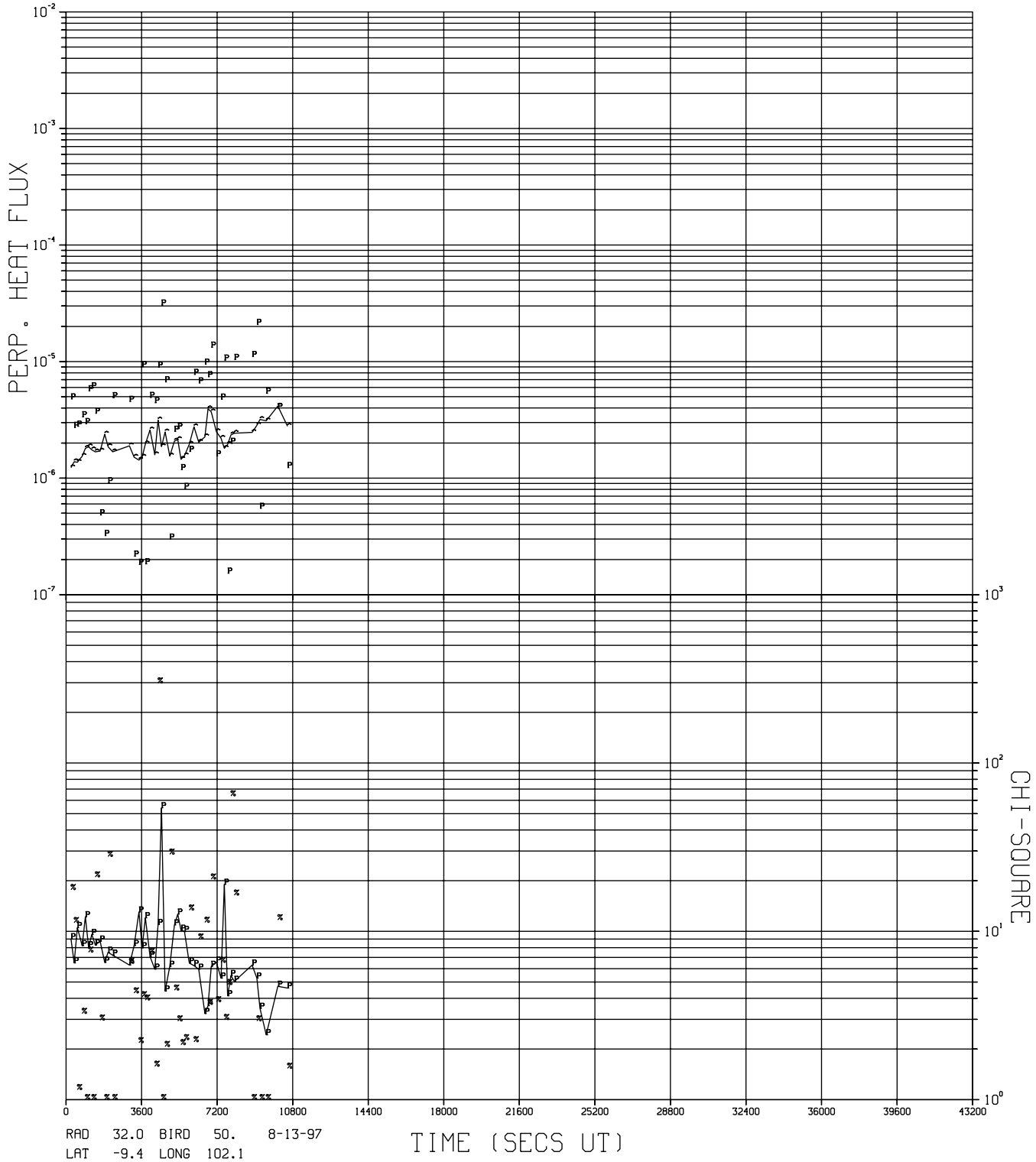

DENSITY
$10^{2}$
$10^{1}$
$10^{0}$
$10^{-1}$
DENSITY RATIO
$10^{0}$
$10^{-1}$
$10^{-2}$
$10^{-3}$
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 32.0 BIRD 50. 8-13-97
LAT -9.4 LONG 102.1

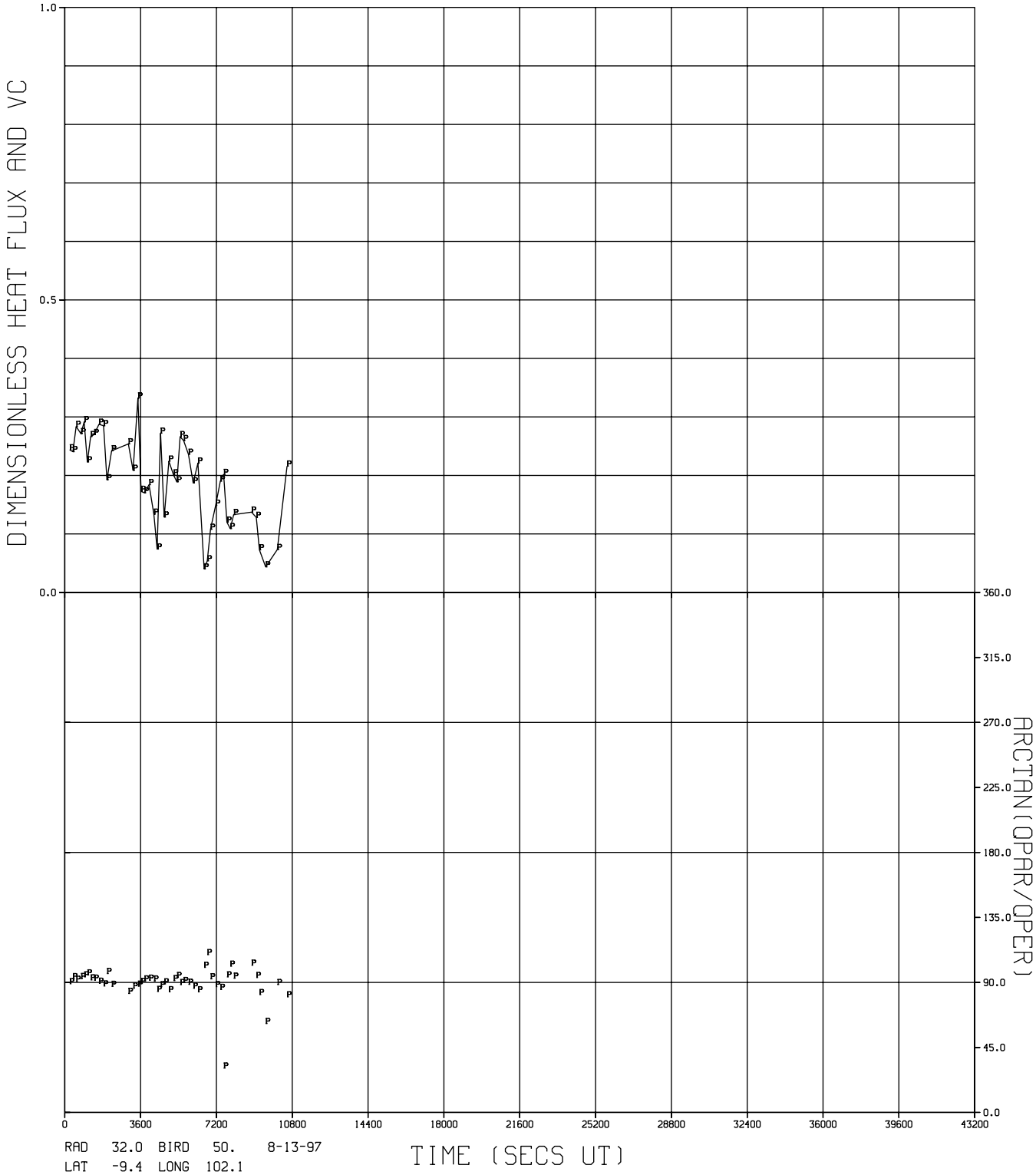

VELOCITY
1000
900
800
700
600
500
400
300
200
100
0
VELOCITY DIFFERENCE
100
80
60
40
20
0
-20
-40
-60
-80
-100
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 32.0 BIRD 50. 8-13-97
LAT -9.4 LONG 102.1


BULK FLOW DIRECTION
20
15
10
5
0
-5
-10
-15
-20
DIRECTION DIFFERENCE
1
0.5
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 32.0 BIRD 50. 8-13-97
LAT -9.4 LONG 102.1


TEMPERATURE
$10^7$
$10^6$
$10^5$
$10^4$
TEMPERATURE RATIO
0
1
2
3
4
5
6
7
8
9
10
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 32.0 BIRD 50. 8-13-97
LAT -9.4 LONG 102.1


THERMAL ENERGY FLUX (ERGS/SQCM/SEC)
$10^{-1}$
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
HEAT FLUX DIRECTION
360
315
270
225
180
135
90
45
0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 32.0 BIRD 50. 8-13-97
LAT -9.4 LONG 102.1


PERP. HEAT FLUX
$10^{-2}$
$10^{-3}$
$10^{-4}$
$10^{-5}$
$10^{-6}$
$10^{-7}$
CHI-SQUARE
$10^{3}$
$10^{2}$
$10^{1}$
$10^{0}$
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 32.0 BIRD 50. 8-13-97
LAT -9.4 LONG 102.1


DIMENSIONLESS HEAT FLUX AND VC
1.0
0.5
0.0
ARCTAN(QPAR/QPER)
360.0
315.0
270.0
225.0
180.0
135.0
90.0
45.0
0.0
0
3600
7200
10800
14400
18000
21600
25200
28800
32400
36000
39600
43200
TIME (SECS UT)
RAD 32.0 BIRD 50. 8-13-97
LAT -9.4 LONG 102.1